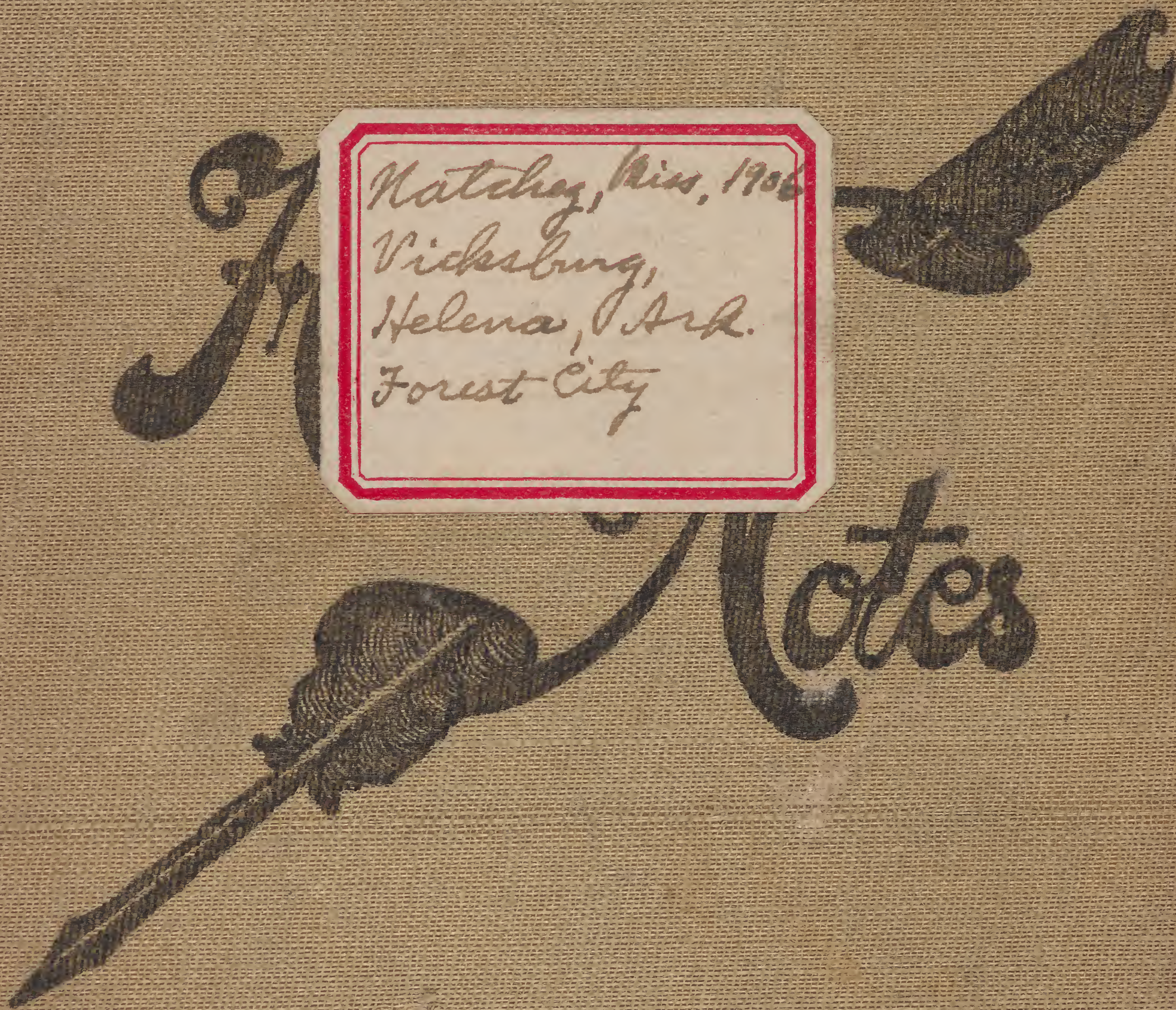


X

Book II

Watches, Miss. 1906  
Vicksburg,  
Helena, Ark.  
Forest City





If this book falls  
into your hands, notify

B. Shimek  
Iowa City  
Iowa.

who will reward  
you for its return.

Dec. 29-1906

Reached Hatchery sometime  
in the night (about 2 AM)  
deft on the boat (Betty Ann)  
went up town at 7 AM.  
Took the train for Kishwaukee  
at 8:30 AM.

On way out from Kishwaukee  
the pines I could see on both  
sides & along creek, distant low  
redish (shaly) to first station  
(Foster)

Before the next station is reached  
the surface soil is mostly redish  
& contains some specimens only.  
At a few points on the Kishwaukee  
ridge.

Selma

Beyond this 2<sup>nd</sup> station I could  
see (from the train) the



appeared to be loess, excepting  
 of the red type (doubtful  
 loess) found at Hamilton  
 etc., - all over S.

Everything at surface is reddish,  
 at the 3<sup>rd</sup> station <sup>(Stanton)</sup> on one

little bank 2 or 3 ft of yellowish  
 material appears, - like loess, but  
 adjoining cottonfields are all red.

At Cannonburg all red, except  
 1 bank, & it appeared as if a  
 few white shales here. The

was in deepest cut - at top, -  
 just out of section.

Another deep cut beyond, &  
 two others show probably  
 8-10 ft. of loess. all on  
 highest ridges.

Soon after we crossed a rather

Coles creek,  
 broad shallow stream, with  
 many sand bars. Cuts beyond  
 this also show fossils in a  
 reddish loess. A few large Helices  
 could be plainly seen. This is  
 just beyond the stream.

All other cuts to and beyond  
 Stampley then show red.

At Fayette red stuff, but  
 one cut shows about a foot  
 of yellowish material at top <sup>at noon (12:15)</sup>  
 Returned to Cannonburg, but

train was 2 hrs. late, & my  
 stay was short, as I left  
 at 2:30 P.M. walked down the

track toward Coles cr, a shallow  
 stream with broad valley, & many  
 sand bars. Found a young Kentuckian  
 (he followed me on horse back "because  
 it was such a treat to see a white man")



He & his family are the only white  
people in a radius of 1/2 miles  
numbered cuts E. from of Cannonsburg.  
1<sup>st</sup> cut E. of Cannonsburg -

near depot, is about 15 ft  
deep & shows loam, -  
lower 6-8 ft quite  
fossiliferous, upper 6-8 ft  
redder & inclines to crumbly.  
Took sample of fossilifer.

Loam, & got shells

The loam is quite compact.

Across the creek E. & only  
about 6 telegraph poles, begin

Cut 2 E. of Cannonsburg.

This is new clunch & is about  
12-15 ft. deep. Mostly brown, but

at W. end a compact  
reddish (quite reddish) loam

appears distinctly at base

with fossils at base.

Have place a little short layer of  
broken shells shows - horizontal

see shells & sample.

About 2 telegraph poles  
beyond 2<sup>nd</sup> cut is  
cut 3 E. of Cannonsburg.

This cut begins just beyond  
wagon way & is about 200  
ft long & about 25 ft deep.

Its uppermost layer - 3-5 ft  
is redder & more crumbly.

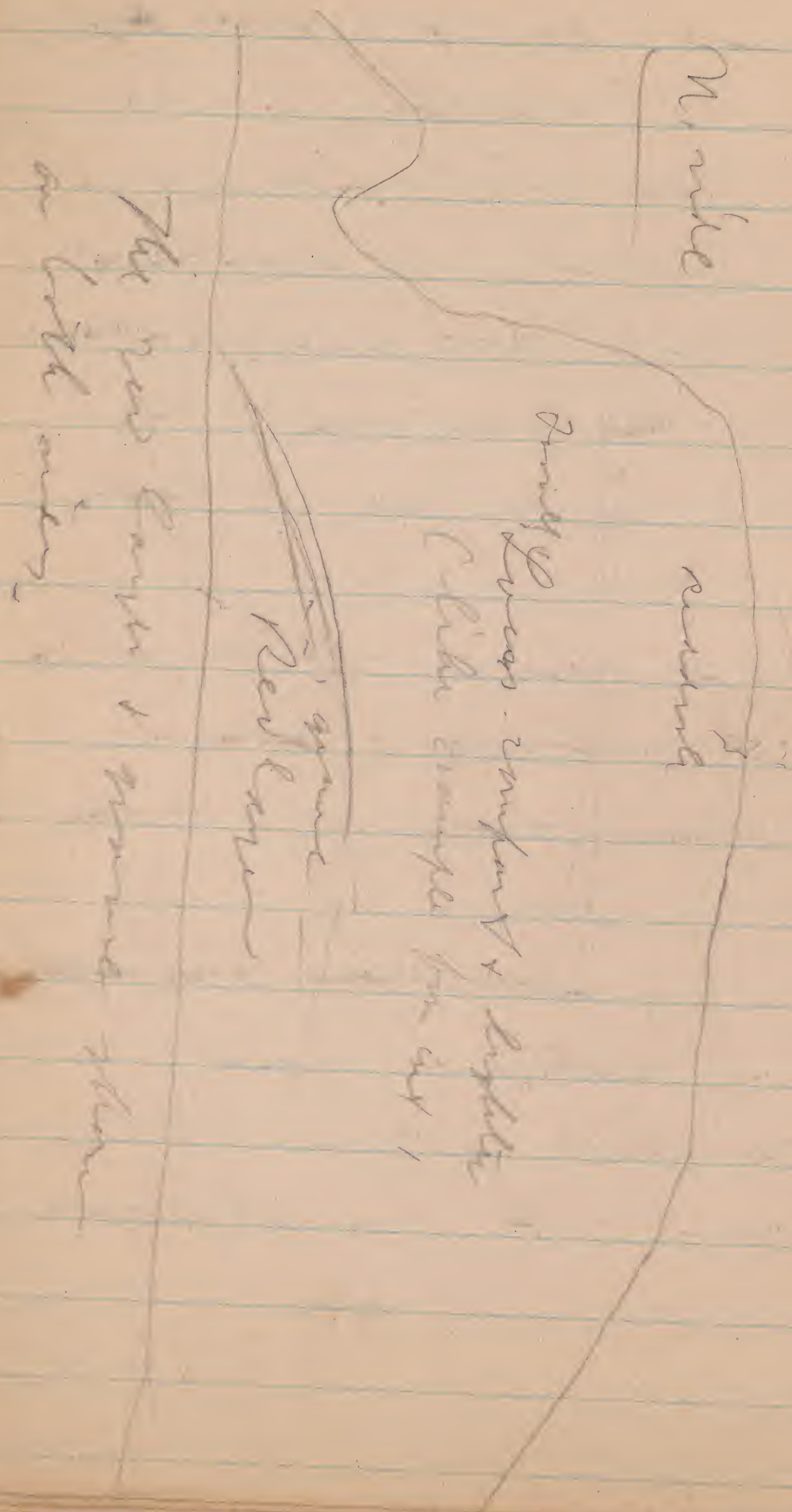
Then comes about 10 or 12  
ft of yellow compact loam,  
below that a very distinct

red layer, which has considerable  
gravel in it. There  
are fossils in this loam.



11

6



7

Cut 4 is only a short distance (150 ft) farther E. It is rather light loam, with fossils quite abundant in lower half - 12 ft deep - all the shells in all these cuts are *Fraies*.

Cut 5 is about 300 ft farther on, & is largely a yellowish fossiliferous loam. See shells.

Cut 6 - A rather hard loam, rather yellow, with a few fossils. A short cut 150 ft from cut 5 & 8 ft deep.



Beyond cut 6 are 3 or 4 small cuts before creek is reached. I looked at 2 of them & they look essentially like cut 6. There are fragments of shells in both.

The section bar at Cannonsburg says that below the loess in cut 1 there is a yellow gummy layer, & sometimes there is a deep red layer above it, & sometimes under it. He also says that at Corbin's cut, the first big cut N. of Cannonsburg, which is on highest divide, there is the white layer, very prominent. Then a red layer, and no yellow clay (loess).

From train, after crossing wide bottoms of Cole creek (which is really a small river, about  $\frac{1}{2}$  mile from creek bank there is a deep cut (15-18 or more ft), which clearly shows fossiliferous loess, & looks almost exactly like

cut 1. Beyond this, another half mile, is another rather deep cut which shows the loess, & that is the last one.

There may have been one possible lot of loess beyond Satterley, but gravel & red stuff show everywhere.

Drizzly rain P.M.

On way up from Hamilton, especially toward Vicksburg, saw loess occasionally.



Reached Vickburg at 7 PM (2 hours late) & put up at the Piazza Hotel, on Washington str., near Veto.  
Spent the evening in re-packing, etc.

Dec. 30, 1906 - Sunday.  
To my great regret found it raining hard in the morning. Worked out timetables, & about 11 AM. went out to cuts 1 & 2. Came back for dinner, and then followed out route indicated by following notes:

Turned out to be a very pleasant day.

Cut 1 - Vickburg is on S. side Veto str. & on E. of Washington (see plan)

5 or 6 ft. of yellow loess (see sample) exposed, & at E. end capped by red loess (see sample)

The loess is soft, fine-grained, with few nodules & scattered fossils.

Cut 2 - is a short cut on E. side of alley, & is like 1.

Cut 3 - is a remnant of ball perhaps 30 ft. exposed.

Like cuts 1 & 2, & indeed all these are part of one set.

Cut 4 - is in E. & N. side of city on which stand pipe stands, & is old near here known. The bank is at least 35 ft. high & seems to be all fine yellow loess.

Termination. Cut 4 extends around



3 sides of block, in part.  
 On the side nearest to river  
 the brown is redder in place,  
 but yellow loam also occurs, &  
 there is no sharp line between  
 them. There is a decidedly  
 redder layer on top, which  
 is part of the exposure.  
 The loam is fossiliferous from  
 top to bottom, & there is  
 no difference between the  
 shells, - they are identical.

Top of cut 7 reads 500 ft  
 again, same as 1 & 5

Cut 5 is about 5 ft. lower than  
 top of cut 1, - its top about on a level.  
 It has just been plowed, &  
 fine yellow loam extends  
 here up to soil.  
 It is quite fossiliferous,  
 has a few nodules, & is  
 like the yellow loam of  
 cuts 1, 2 & 3.

✓ Plot m. Residence with magnolias  
 too close to house

✓ n. Looking N. - one of hills - off  
 end of Cherry St.

✓ 17. Cut 7 - looking up hill

✓ 18. " 7 - upper part - picked

✓ 5 - Looking S.E. from top of cut 7

✓ 6 - Yuccas

✓✓ 10 B. Yuccas in front

Looking from  
 hill  
 34  
 34



Cut 6 down about 10 or  
12 ft of a curious much  
whitish fossiliferous loam,  
with a few nodules, &  
its upper part yellow  
with blue red marks.  
See samples.

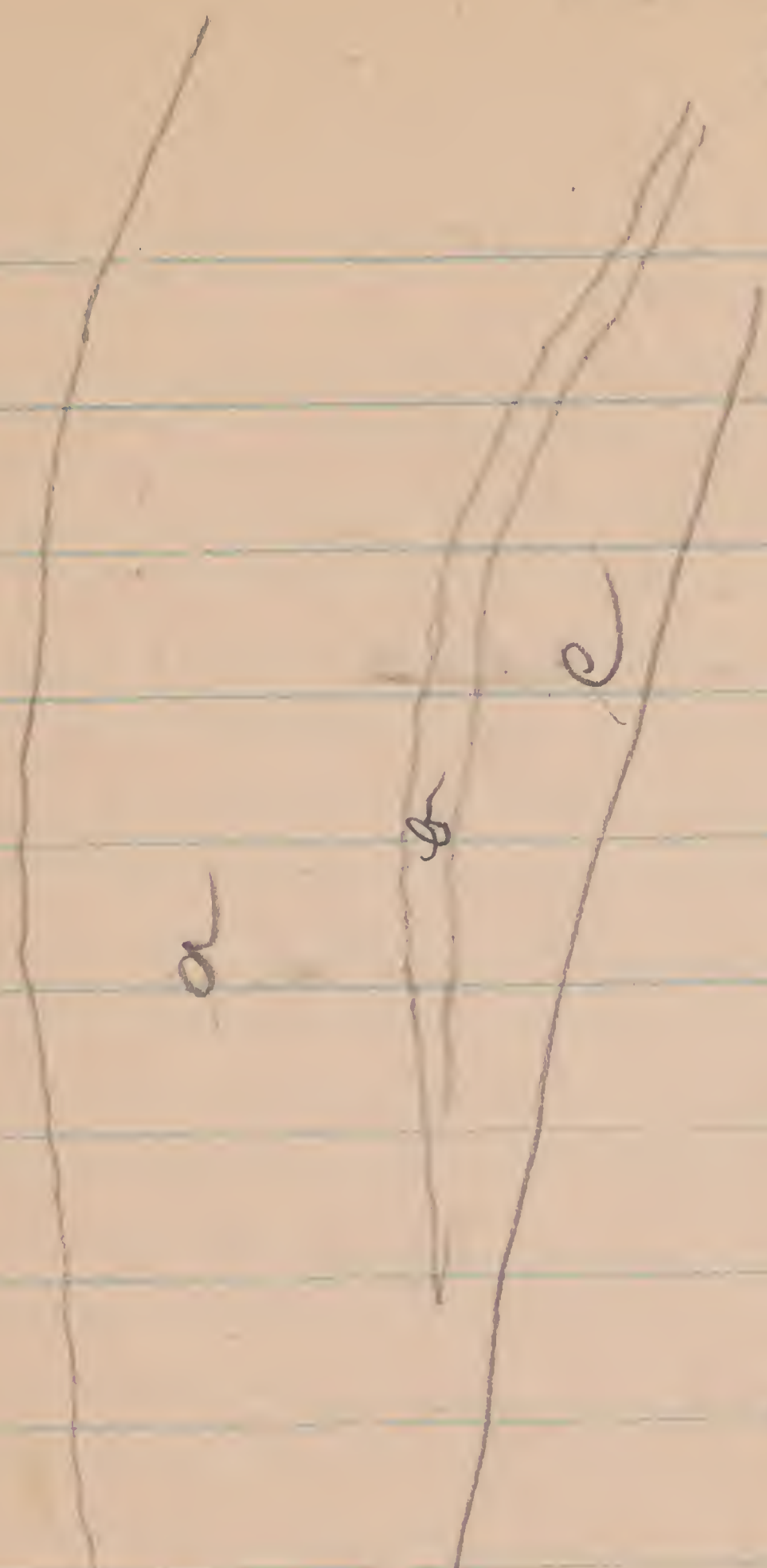
Top of cut 6 was about 445  
Road at base about 820.

Cut 7 - a is a reddish  
loam loam 15-20 ft deep,  
It contains fossils, especially  
the larger *Microdon*.

b. is 6-12 in, a deeper  
red loam, appearing darker  
on old surfaces.

c. is whitish loam,  
much compact

cut 7



There are fossils in  
all & they grade up  
through all. The  
layers are not sharply  
dipping, but are clear

Lower down, toward foot of hill, the  
loam is chiefly whitish & heavy, like  
that of cut 6. <sup>There was a little variation</sup> shells up the hill, rather than  
from one stratum to another. Lower shells upward.

Cut 8 is a low cut at top  
of ridge, near camp.

sandstones, & shales.

Fossiliferous loam, with  
red dirt stuff above. (See sample)

The red shales down a little  
into more compact nodular loams

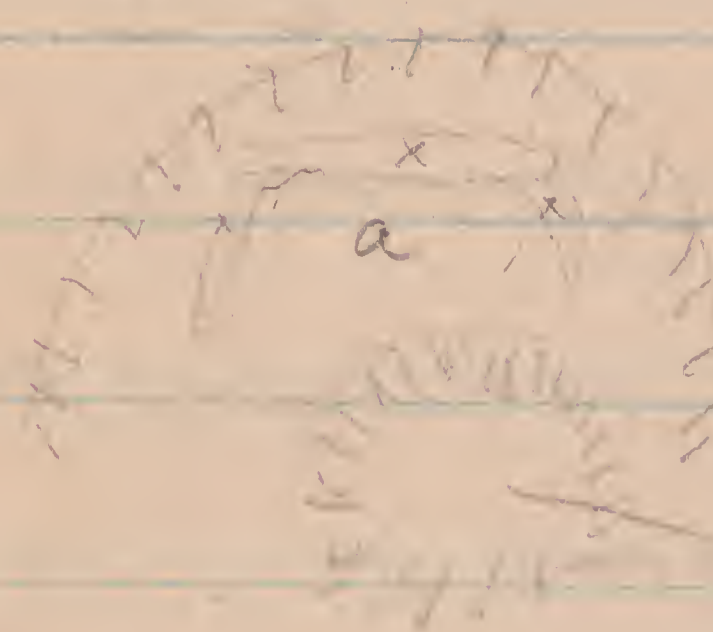


and this has fossils. On very front of  
hill, at Camp, battery, no fossils, & very red,  
top of point with Camp <sup>crumbly</sup>  
earthwork is 505.

All these rises to cuts  
1+3 are nearly same  
height.

The Camp earthworks were  
like this:

Top view.



Hill

Mound of earth,

evidently thrown out of a which  
is a depression. The parts x rise  
very little, but a is a depression.

The mound is called the  
"devil's backbone" by the negroes.

Several metallic tablets, set on  
iron or steel posts, communicate

17

The fact that certain small  
detachments, - all Kanawha  
heavy artillery, were stationed  
on these hills between the earthwork  
and Vicksburg. In all cases they  
were concealed on the sides, - not out  
on prominent points.

On the return I found barometer  
reading 475 ft. at cuts 1+5  
I had set it at 500 ft, &  
all the readings heretofore recorded  
were on that basis.

The altitude of Hotel Piazza  
(walk in front) above the flat  
(tracks of Y. & M. V. RR at  
depot is 125 ft., & cut 1,  
upper end, is 30 ft. higher.

Hence my 500 ft. point is  
155 ft. above tracks of Y. & M. V.,



This makes the hills,  
generally, run from  
150 to 160 ft. above the  
flat, & this is ~~15~~ 20  
ft. above the river, -  
now at rather high  
water.

I checked the readings 3  
times on a part, twice  
on the remainder, and  
they agreed very well.

Went to depot &  
waited for the 10:40 P.M.  
train.

I am thankful that  
I am leaving this  
nest of graft and  
filth. I never saw  
rough, muddier, poorer

streets in a town. They are  
a reproach to any  
community, and mark the  
people of Vicksburg as a  
low set.

There are a few rather  
nice residences on Cherry  
str, but nothing like  
Natchez. Natchez is  
high-priced, but also  
high grade. Vicksburg  
is high-priced and low-  
grade. Saloons are quite  
numerous, & evidently well-  
patronized. The men of  
Vicksburg do not begin to  
show the "blood" of the  
Natchez men. There is  
simply no comparison between



The two places.

At a Church on the  
street 1 block W. of  
Cherry str, & northward,  
I saw an old stone  
monument erected to  
Dr. Morley? who, as  
the inscription says, was  
murdered by gamblers  
because he fought  
vice, away back in  
the thirties.

Left at 10<sup>50</sup> PM.

Dec. 31, 1906 Monday.

Awakened near Lula, and  
reached Lula at about 5<sup>15</sup>  
am. Waited for Helena  
train until 7<sup>30</sup> am.

The line to Helena runs  
through flat bottomland  
much of which is in cotton  
Considerable timber also.  
The whole train was carried  
across the Mississippi on a  
ferry, and we reached  
Helena at 8<sup>30</sup> am.

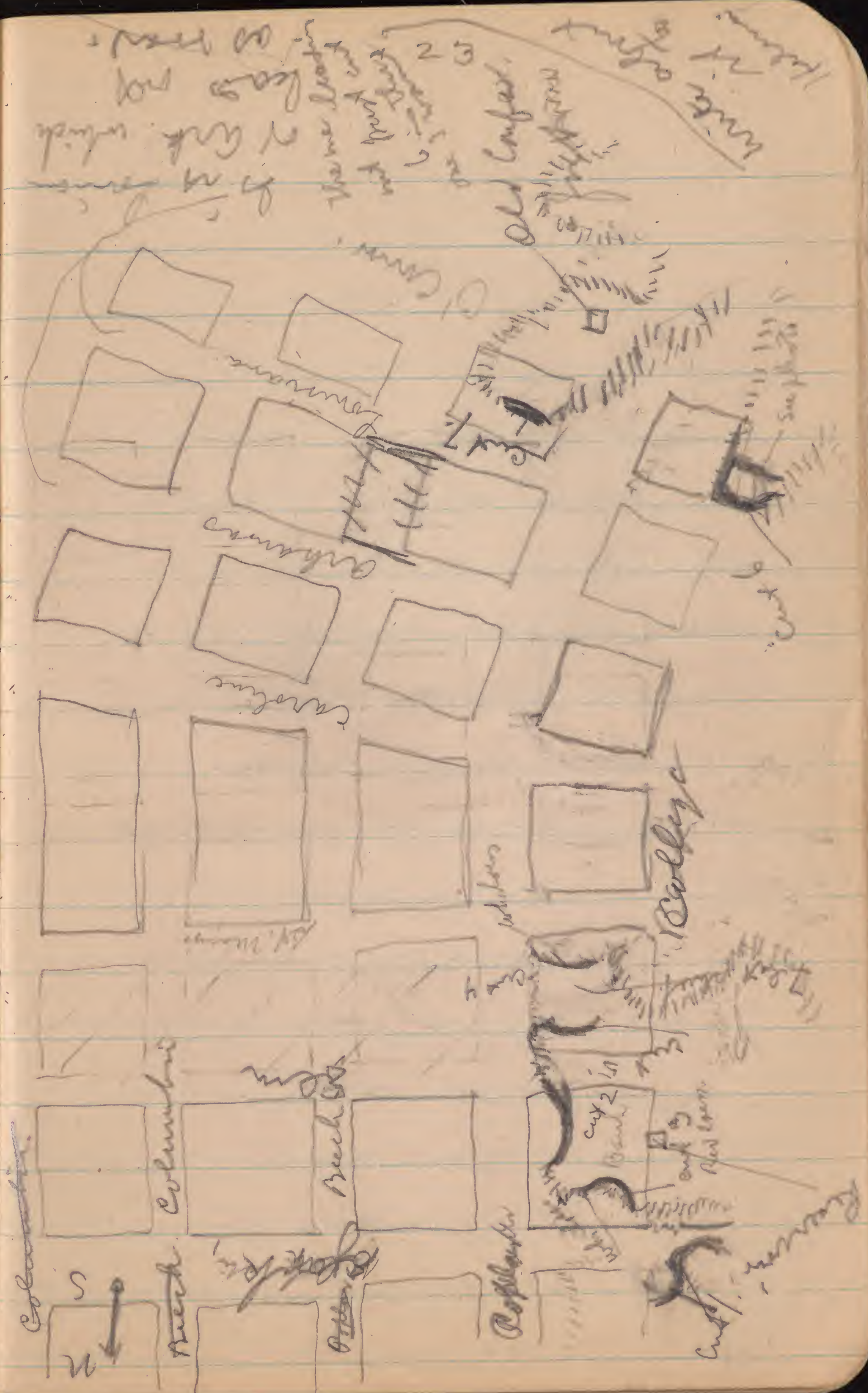
Put up at New Pacific Hotel, &  
worked on Crowley's River,  
after fixing map, etc.  
Commenced at cut the near  
cor. of College and York str.



Cut. 1 - To base is 65 ft  
from bottom - level of  
York street. To top of  
ridge 100 ft. from York st.  
This layer is a heavy sandy  
loam for the most part, gray,  
or with iron lines or bands  
in it. It shows a stratification  
with columns, & breaks like  
loam. Portions are whitish  
& other parts yellow.

The yellow parts often have blue root tubes.

Granules & small nodules  
are quite abundant.





dressing. In some places this is rather abrupt, & again 4 or 5 ft. of yellow loess form a transition.

It is fossiliferous from top to bottom & the fossils are very fragile.

The red layer is 2 or 3 ft deep on top, & is lobular.

On lower slopes it is sometimes thicker - 4 or 5 ft.

It has no fossils etc.

In the lower part of loess there are white bands & then yellow bands.

On the slope extending almost to College etc.,

the white loess is exposed more or less. It shows

here large *Helices* like *H. perforata* & *H. albolabris*, - badly broken.

The ~~loess~~ evidently blankets the slope.

At <sup>some</sup> junction of white and red layers the former often has numerous parallel lines, following sections.

See fossils and samples taken as follows:

- 1 - Woodbury & iron tubes etc.
- 2 - White loess about 45 ft. below top of bank.
- 3 - White loess near top.
- 4 - Red top layer.
- 5 - Shells.

Above the red loess shown on top, several feet thick. Line not sharp.



Cut 2 is a splendid one.  
There is a distinct lower gray  
loam & an upper red loam,  
the latter varying in thickness.

The red loam shows just in cutting,  
while the white loam is like partly  
fossils are very abundant here.

I could see them ~~and~~ the sides  
on both white & red loam.

The fine washed out material in  
the mixed lot of shells, probably  
nearly all came from white loam,  
where the small shells are  
more abundant.

I notice that in the red loam  
*Mes. multicauda* was much  
more common. Otherwise the  
shells were the same, and

they seem to run right up  
through. I took a set each  
from the white (loam) loam &  
the red loam, and also picked  
up a mixed lot from the "wash".  
(Look at clay inside of shells <sup>& determine</sup>  
which they came from).

There are also lime nodules in  
both loams.

The line of demarcation between  
the red & white is not sharp.  
There is a varying thickness of  
transition loam becoming less  
red downward, and shells run  
right up through.



Jan 1 - 1907 - Tues.

Elevations - Cherry & ~~Richter~~ 100 ft.

4 mi. of York 115

Shelf. base cut 2 - 160

about middle of cut 3 dump 180

Top of wh. loam cut 2 200+

" " " (exposed) cut 2 220 +

" " ridge above cut 2 - 230

" " " further back - 260

This is about on a level

with top of ridge S. & E.

Some of the hills <sup>20-</sup> rise 30 ft

higher

Foot of cut 4 - 125

Shelf between cuts 4 & 5 - 145

Road-base of cut 6 - 170

Base of cut 6 185

about on a level with top of 5.

Surf. of road 20 ft. higher than reservoir

A few scattered  
ore scattered  
in later strata  
at this point

Photos - 11. Looking S. towards cut 2 (in background)

✓ 12. " " looking N. to cut 1 - (in background)

✓ 13 - cut 2 - Looking W. of S.

✓ 14 - See X in cut 2 and page

✓ 27a. Look down ~~the~~ from top about 2 -

✓ 27b. a little W. of N. from same pt.

Branch to left = cut 1.

✓ R. Base of shells - cut 5

✓ S - " " + pot hole - cut 5

✓ C - same as R

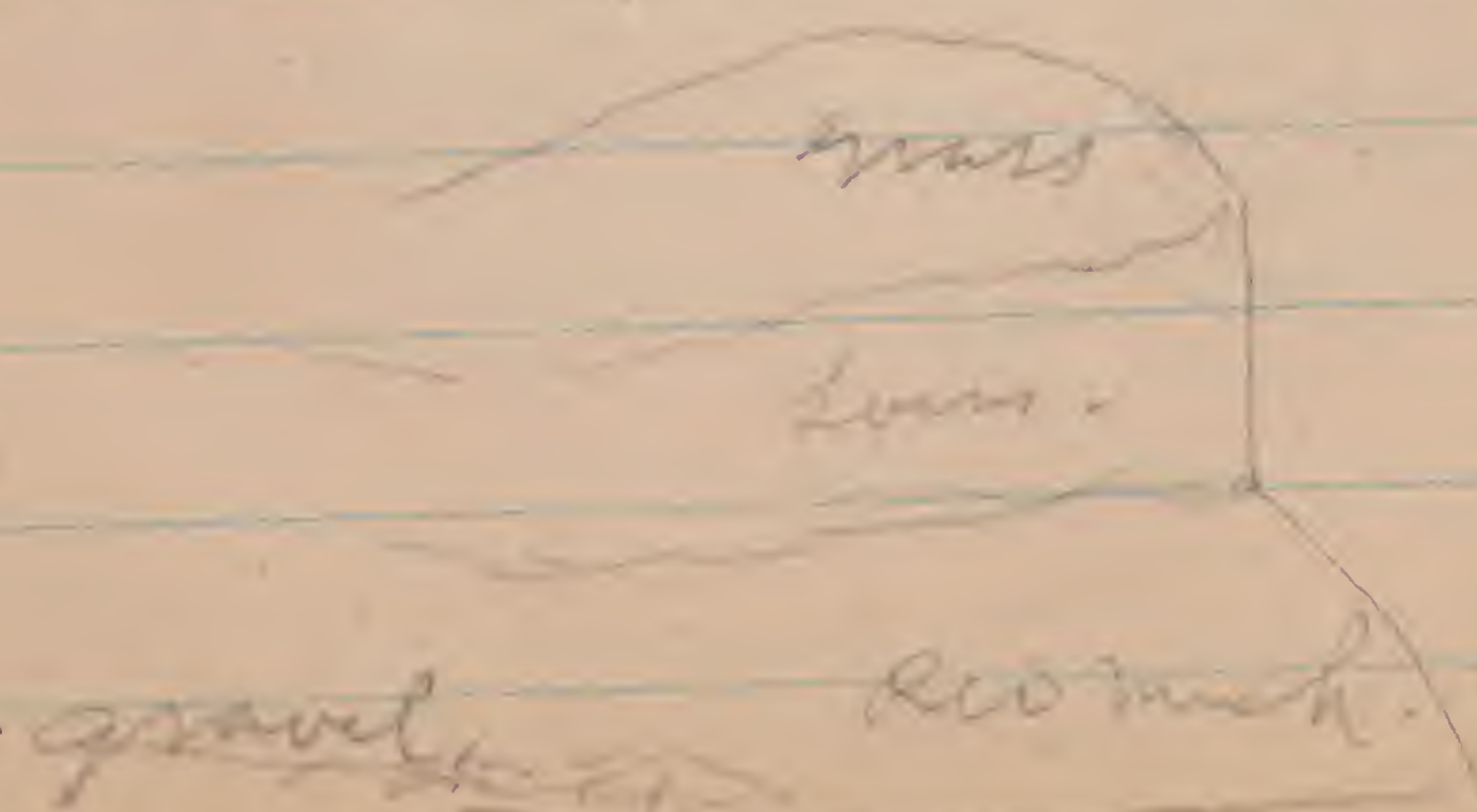
✓ 8 - " " S - cut closer.

✓ 27. Looking towards cut 2 hill - from cut 6

X ✓ 28. Cut 6 - E. side.

✓ X - cut 7 - side view.

✓ 12 - cut 9





cut 2 in profile

Transition layer

shell,

photo 14  
thin part  
in center

Red layer 1/4 way  
up

whitish sandy  
layers

Red layers  
(yellowish brown)

Sample 4

white layer

7 car

The red layer is normally red -  
lays no blue, while white  
creeps out. But (a) is white layer

My sample of red layer  
is about 6 ft. above  
here

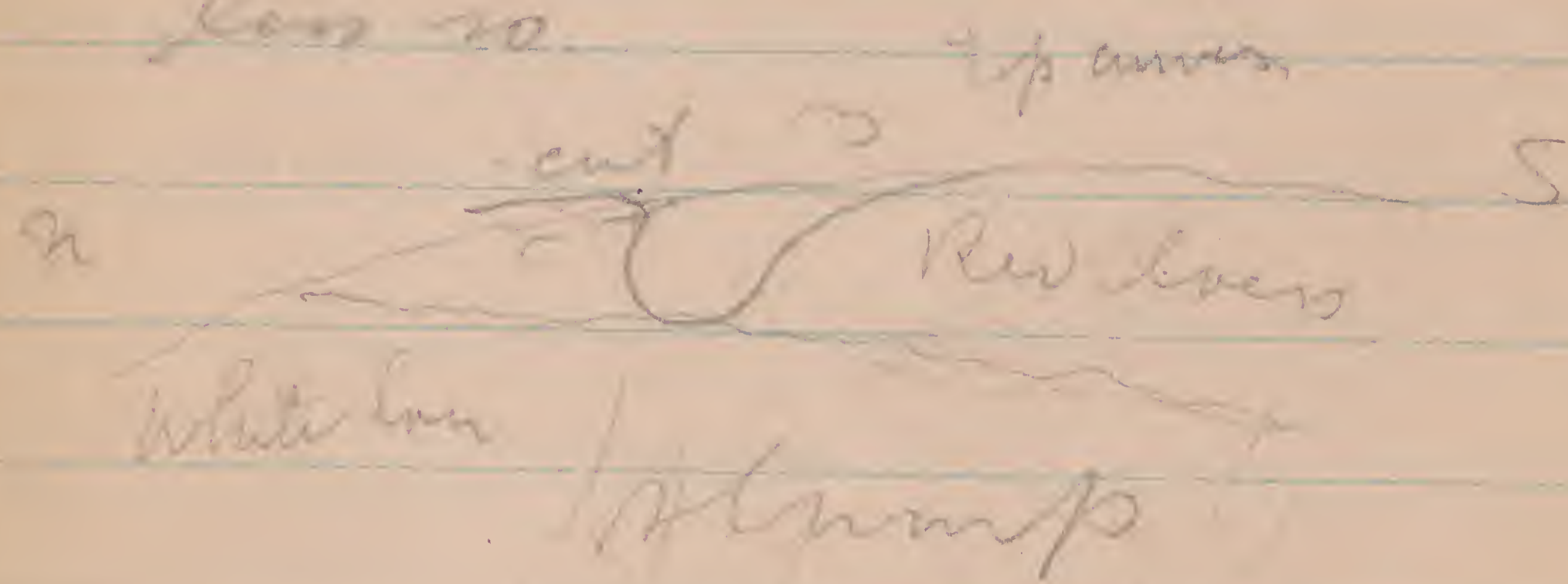
Flax

A more or less horizontal lamination  
is shown in the red layer.



Cut 3 shows red loam S. side  
& white loam at N. end.

No red loam on top at N. end.  
all this is badly lumped,  
but I could trace shells  
to each layer very clearly.  
The red loam is here very rich  
in fossils, the white much  
less so.



A little point of wh. loam  
at 2 near cut 3, showed a  
great number of fossils,  
many crinoids. The white  
loam shows these crushed shells

commonly. Is it because of much  
water & of creeping? The  
red shows shells more perfect.

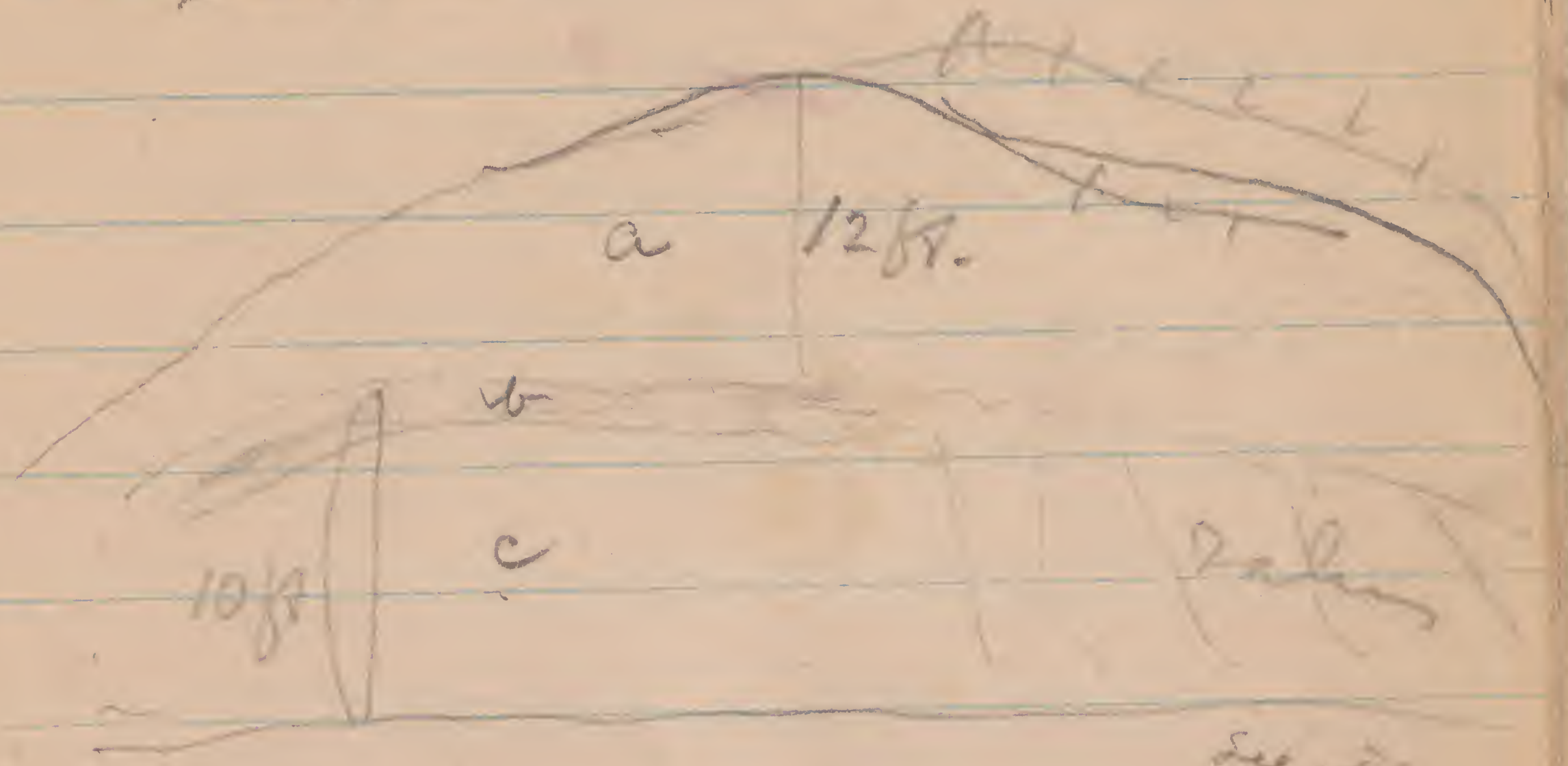
W. of cut 2 - plane marked  
"slope" shows white loam, some  
fossils. Higher up, &  
in some places lower, is  
a little red loam (change  
abrupt) with many fossils. Even  
on surface.

Worked cuts 4 & 5, which  
practically connect with  
cut 2 & are part of same  
hill.





Cut 4

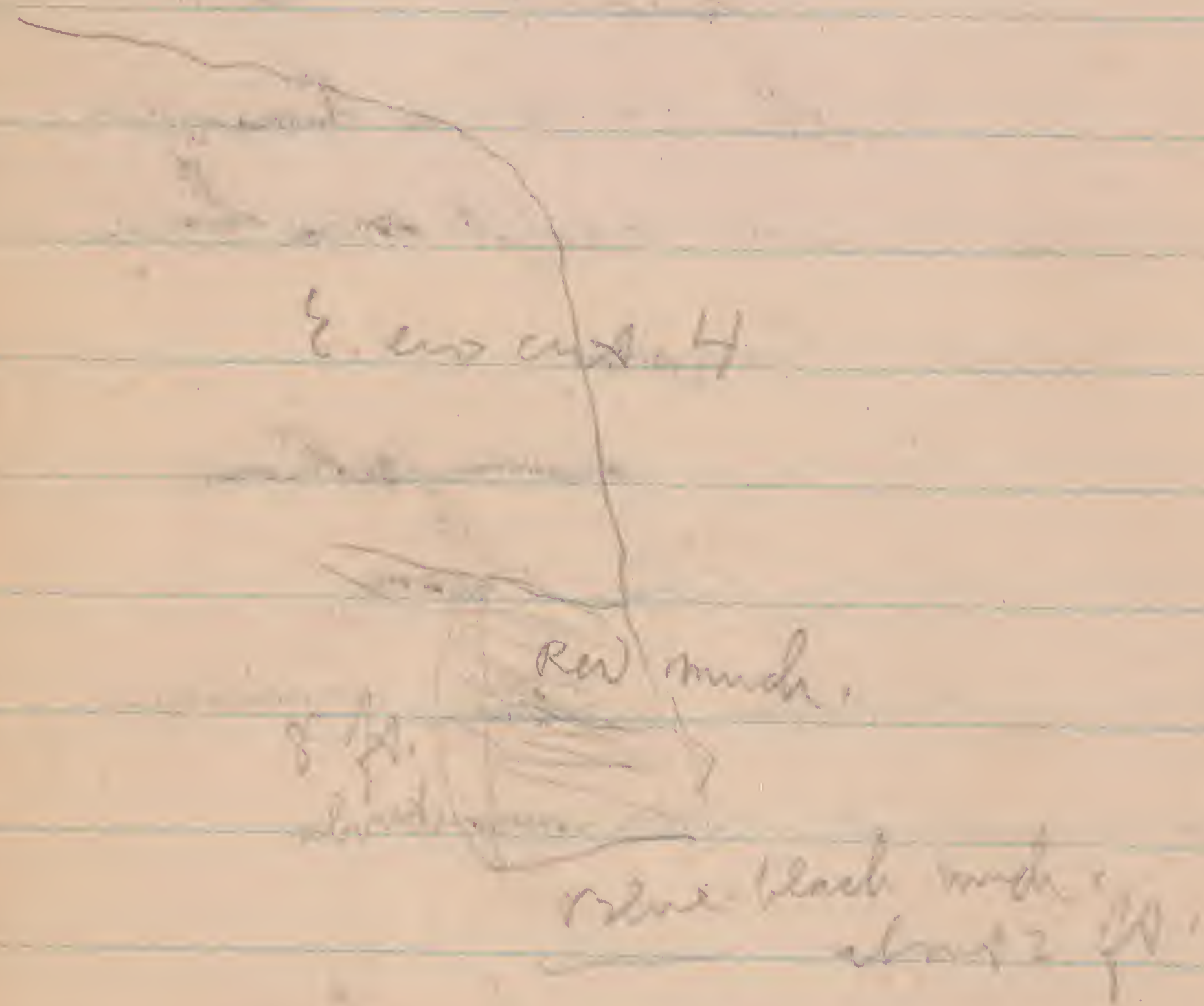


a. is a yellowish loam, full of fossils, & with blue iron tubes. Evidently a continuation of the white loam of cut 2. Shells much broken. see sample.

b. is a chocolate colored or red loam & below it a lighter (c.) red loam of gummy mud with lime nodules. This last is evidently not loam.



Near cut 4 low down  
there is red stuff at  
surface, & some of  
it clearly over loess, but  
it is coarse (loose)  
& very friable

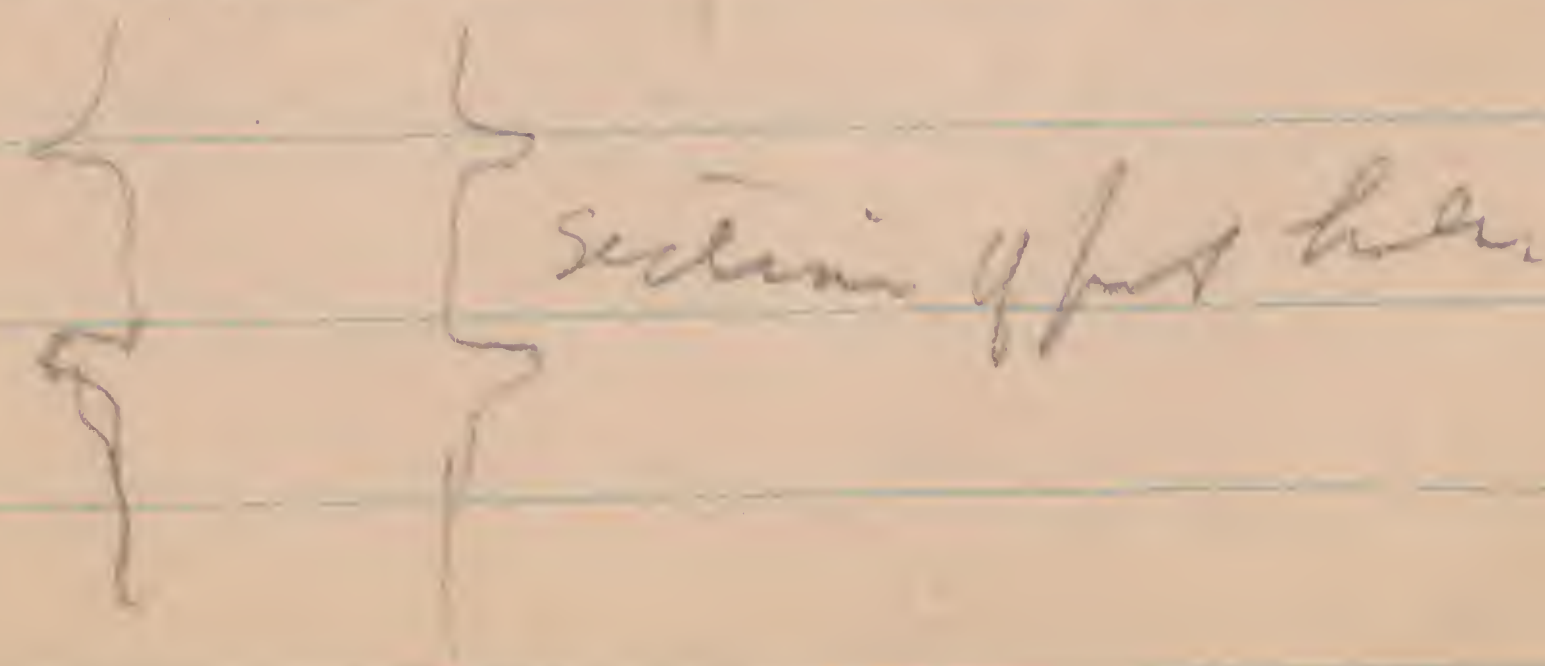


Between cuts 4 & 5 is a  
flat shelf, a result of  
excavation. This is 16.5 ft. (see p. 28)

Exp. 5' shows white loess  
below, becoming much finer &  
without fossils, same way,  
& red loess with fossils  
on top, - just a cm. of cut 2.  
Forms a layer of shells (brake)  
nearly horizontal, in lower  
part of wh. loess a large  
mudule at left end lay  
in same layer.

Pot holes are everywhere  
common in the loess.

These pot holes often have  
horizontal structure





The chocolate layer shows  
just at flow of  
shelf between 4 + 5.

It evidently runs  
under all the hill.

The shell layer is in part  
of wh. loam quite without  
fossils!

Cut 6 is mucky loam -  
yellowish, a sort of intermediate  
condition, but evidently  
comparing to wh. loam.

See fossils & sample 6.

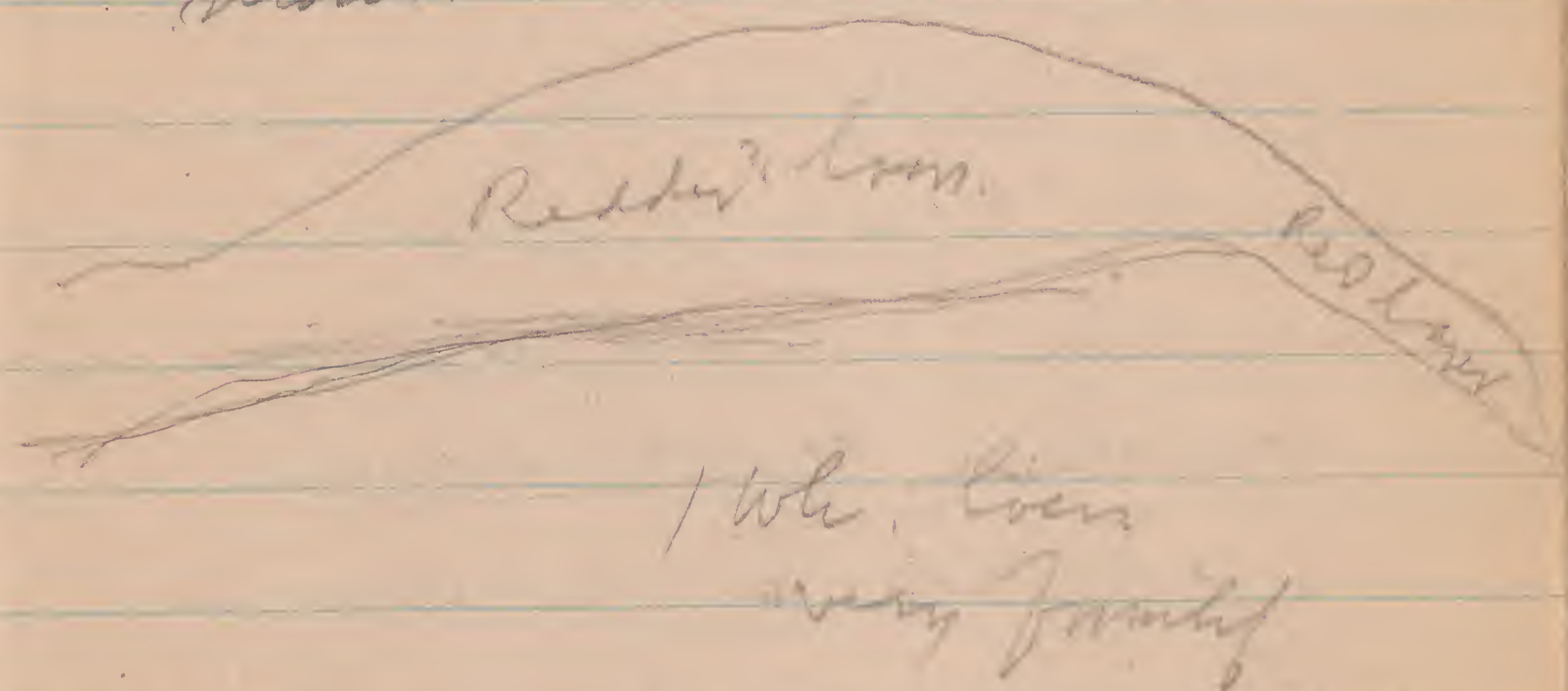
This loam rests on about  
6-8 ft (exposed) of  
red muck, as in

cut 4. Not loam.

Up on top there is a

redder loam (3-6 ft.) visible  
from below. Cut is about  
30 ft. high.

The loam here is very seepy  
& in places has many  
nodules. Some parts of  
it are quite white.  
On the E. side this cut  
shows:





Cut 7- Bluff 55 ft high

On top a little sand  
running. At base  
chocolate layer shows  
but most of base obscured  
by talus.

Major part of bluff  
white, crumbly, very  
friable. Some with  
brown nodules.

See profile

Comp. face is 45  
ft. higher than top  
of cut 7.

Top of ridge - cut 7, is  
above cut 2, & above (top of)  
cut 6, are about  
on a level.

### Return

Base of cut 6 is 135 ft below  
comp. ft.

Base of cut 4 is 40 ft  
lower than base of cut 6.  
Shelf between 4 & 5 is 20 ft  
above base of cut 4.

Shelf - base of cut 2 - about on  
level with base of cut 5 (shelf)  
Level shows shelf - base of cut 2  
about on a level (lower) with  
base of cut 6.

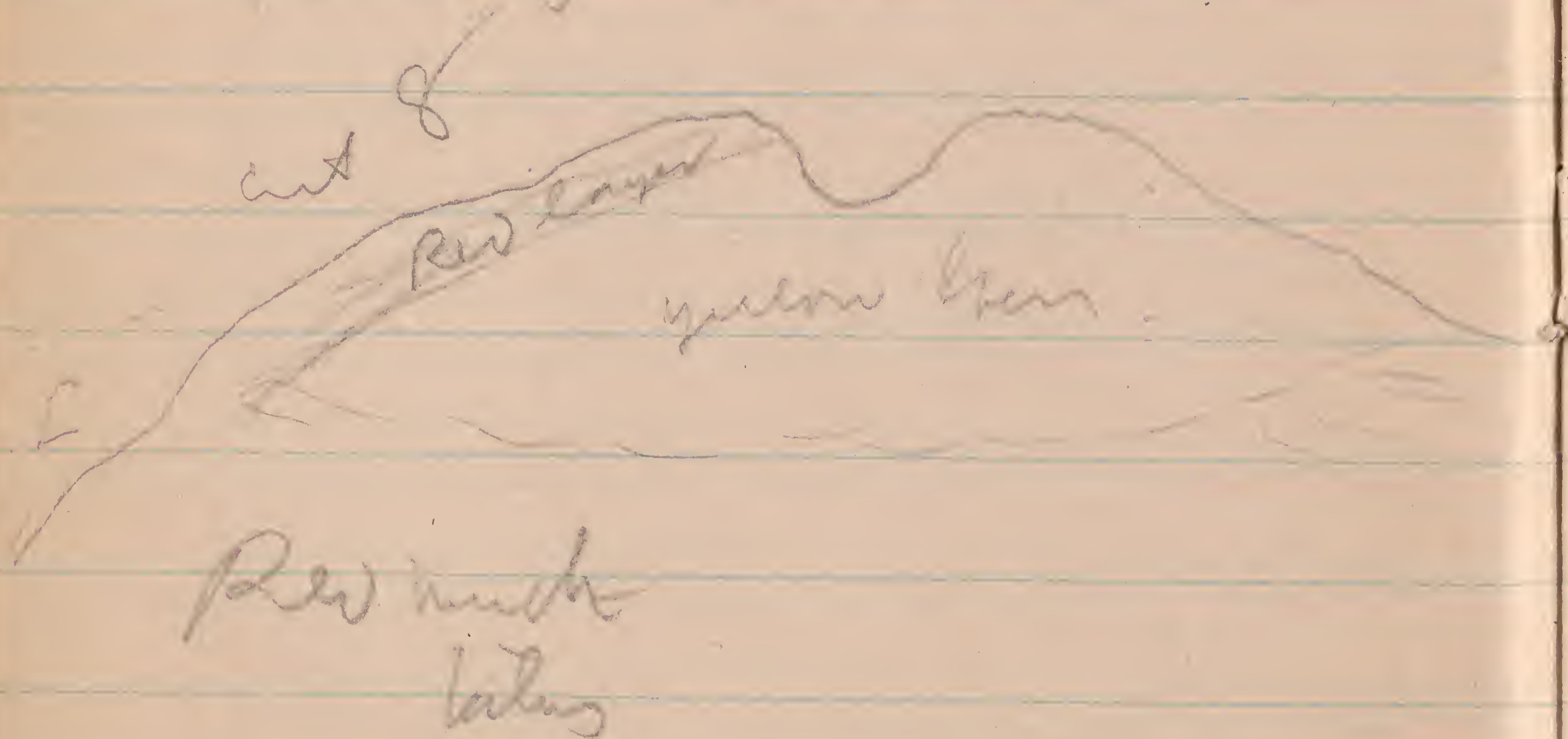
York ~~Bluffs~~ 50 ft. more  
than shelf.



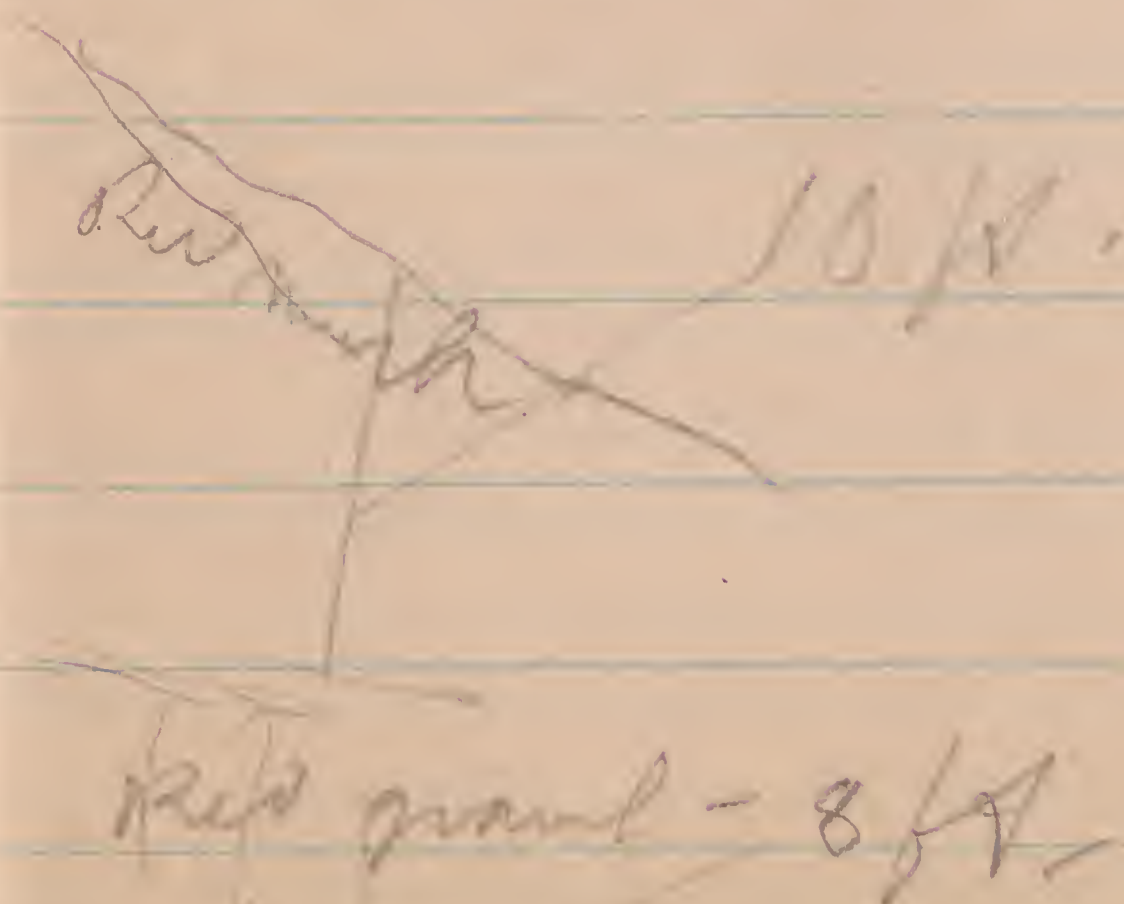
Cut 8, shows white loess  
to top in center & red  
on side.

Red much below. & its lowest  
part shows red gravel  
the loess is about  $\frac{1}{3}$  to top.  
Probably 15 ft.

Shells same as before,  
mostly broken

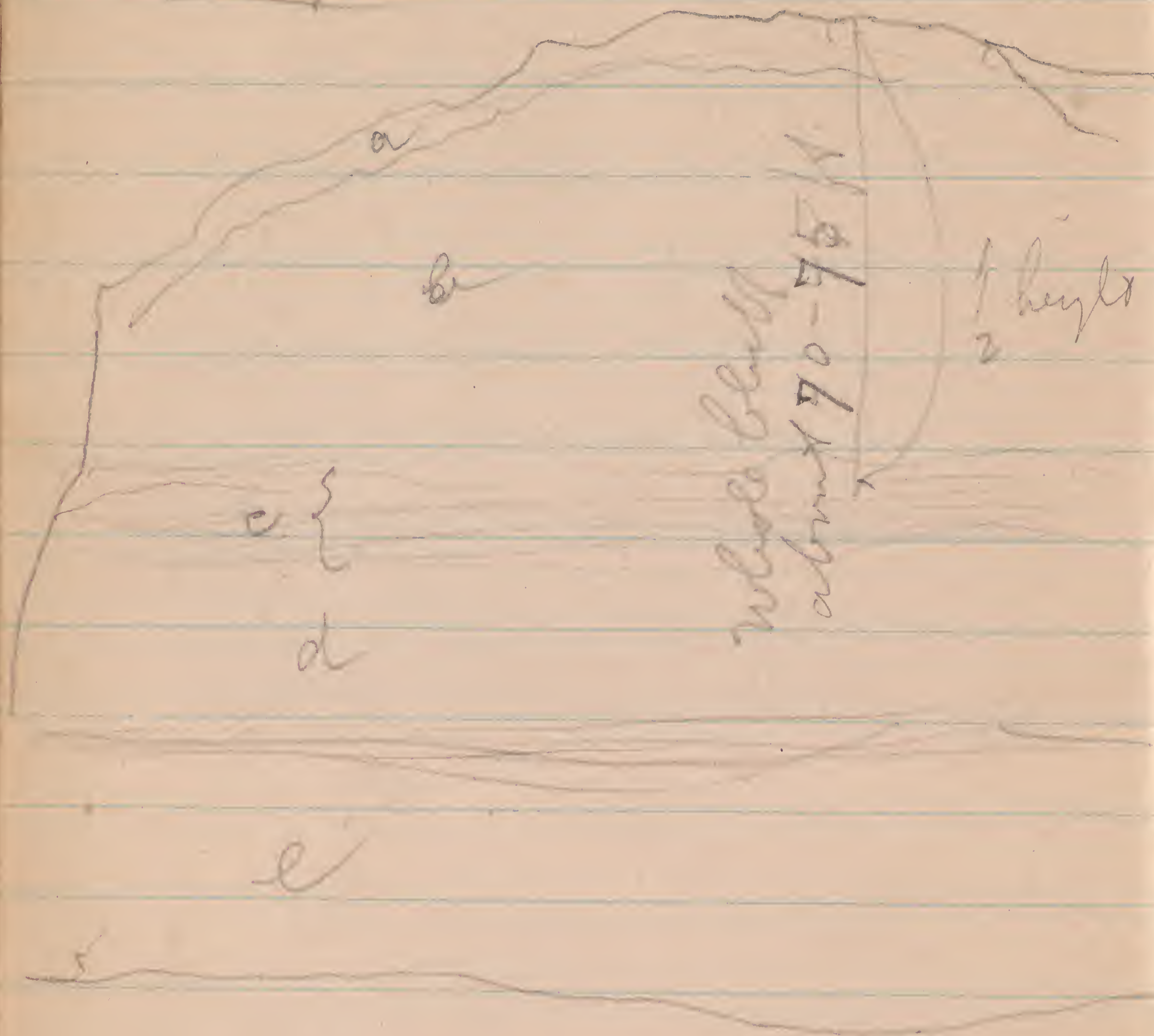


It was getting late &  
threatening rain (which  
came later & got me wet)  
I had to make remaining  
observations in a hurry,  
but I think carefully.

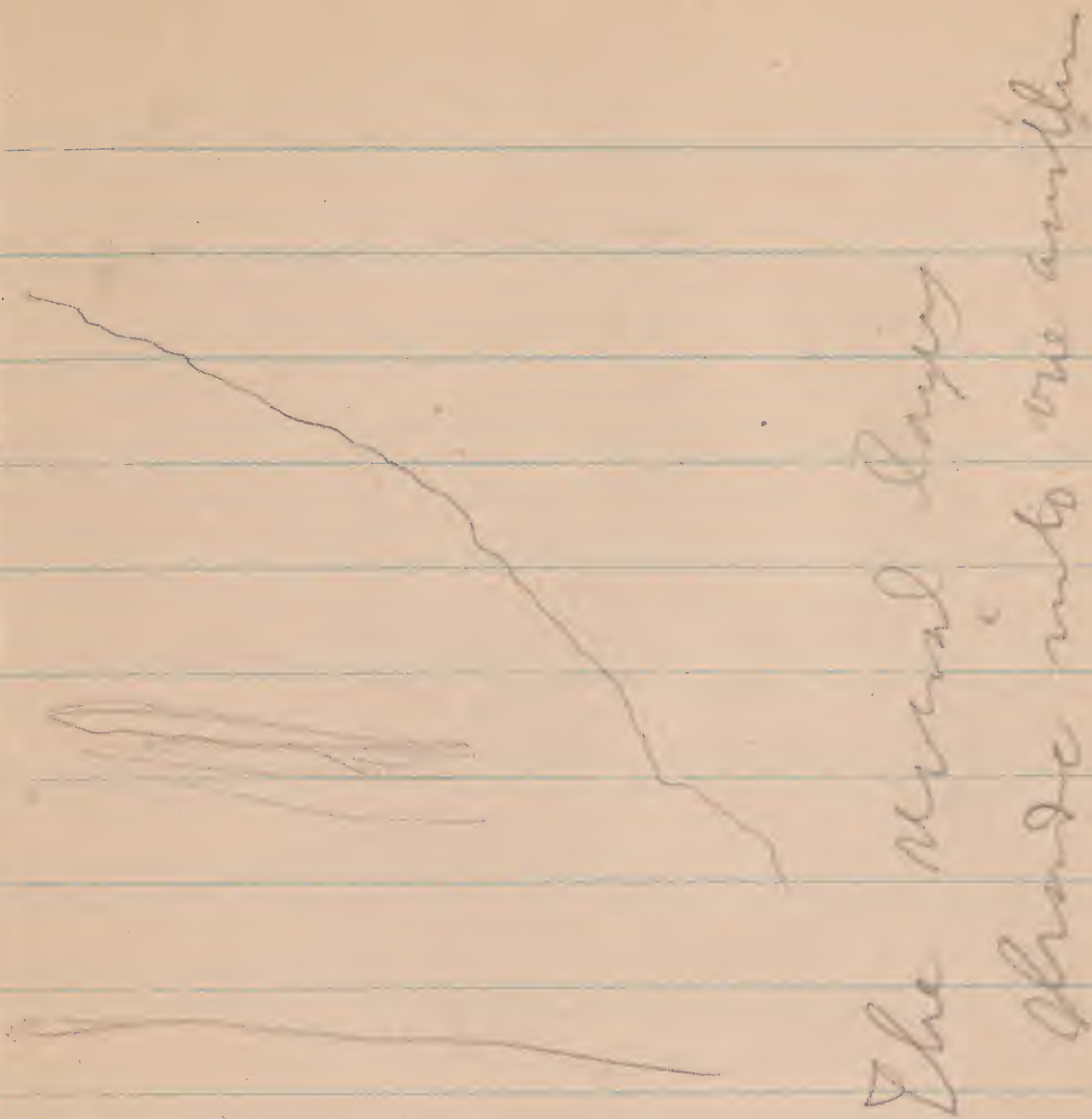




cut 9



- a = top red dune 2 ft.  
 b = white loess 25-30 ft.  
 c = chocolate loess  
 d = red mud  
 e = gravelly stuff



The loess is white, creasy  
 & windy with nodules &  
 broken shells.  
 In lower section part I  
 found a shell partly embedded.  
 It was here quite much  
 abundant.

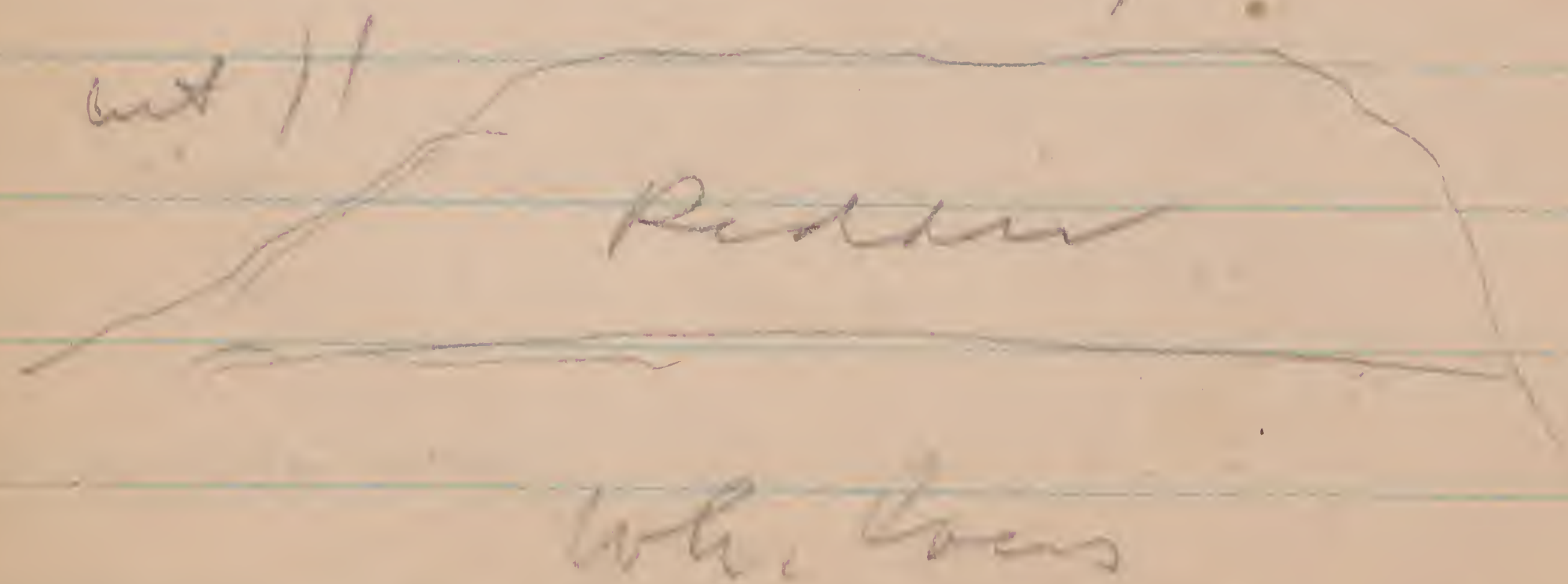


Cut 10 is part way  
up slope &  
is yellowish loam  
(or whitish) with comparatively  
few shells, & some  
lime nodules.

Cut 11 is pretty well  
up, & is blue  
loam, with very  
few fossils.

There is again a  
redder top layer.

Cut 11



Cut 12 shows  
wh. loam & some  
shells. The upper  
part of cut is white  
loam with a good many  
shells. I got a few &  
a sample of clay, but  
it was too late, and  
raining, and I could  
not see well.

On E. side of street the  
upper redder layer seems  
to be present.

There is here at Helena  
about this section.  
The hard muchy red layer  
(below running into gravel,  
as in cuts 9 & 10) which



occasionally grades up  
into loamy stuff, & usually  
there is a gradual transition  
from this to the loess  
above. The loess  
in its lower part is  
white, sometimes tinted  
yellow. This part  
is crumbly, wet, cuts  
like putty, and usually  
has a large number of  
more or less broken fossils.  
Also some lime nodules,  
& when yellowish, with  
blue root-tubes.  
Above this, usually gradually  
changing, rarely sharp, is  
a red clay loess, in many  
places thin & even fossiliferous but  
as in unit 2, with many fossils  
better preserved. It is further the  
nodules, & stands vertically, more

firmly. In lowest place, near base of hill,  
this seems to become coarser, & has more  
boulders.

Jan. 2 - Wed.  
Left Helena at 6<sup>35</sup> am.  
Raining all morning.  
Left on St. Louis & Iron Mt. & So.  
The R.R. runs around the  
end of Crow-Lips Ridge.  
It is near the base of  
bluffs which drop quite  
abruptly to a broad  
plain.  
It is a series of  
rounded broken ends  
of ridges, mostly timbered.  
The hills are rather low  
on west side.

Beyond the 2<sup>nd</sup> station, &  
almost to Third, the  
hills run back from  
R.R., and are low, narrow



Slopes,  
 The red top-dressing  
 shows plainly in  
 low cuts of "foot-hills".  
 The RR again leaves  
 the low hills, & to  
 Laton runs over  
 flat plain, a  
 large part of it  
 low, flooded timber.  
 Negro cabins are in  
 places scarcely above  
 level of water.  
 At Laton some of  
 hill houses are  
 on posts.

A low cut at Laton  
 shows red top-dressing, &  
 something grayer below.  
 Doesn't look quite like  
 loess.

Next stop Lixa - same.  
 Flooded timber in sight.  
 At Lagrange a higher  
 terrace appears, - but  
 it went all low. Largely  
 cotton. Some corn (little)  
 Much cotton not picked.  
 Just beyond Lagrange the  
 hills, now again distinct, but  
 rather lower than at Helena,  
 some close to RR.

From there until near  
 Marianna the hills are  
 distinctly visible from 1/2 mi to



a little over a mile away.  
The RR runs on same  
kind of flat.

Marion is located on  
the flat & vicinity is  
low. The hills are probably  
 $1\frac{1}{2}$  mi. to S.E.

Saw some nice walnut logs  
at depot. There is a  
small mill cutting here.  
It is raining all the time  
& this of course explains  
the exaggerated flooded  
swampy condition.

Lots of cotton at depot  
at Marion, but  
at Helena there was  
much more.

Big platforms are built

at all the depots for  
cotton bales.

Beyond Marion no  
hills are visible.

Felton is on a flat,  
with cotton all around.

Also some corn.

Crossed the river, much flooded  
just beyond a stop at a  
saw-mill or lumber camp.  
Much unpicked cotton (large  
plantations), beyond Haynes.  
Girdled oaks & other fine  
trees in many places.

This was a little  
station - sounded like  
Cana, just before Haynes.  
But cotton, etc. extends  
to Haynes.



There is a cotton gin at Haynes.  
No hills in sight.

There are also extensive corn-  
fields near Haynes, with  
dead girdled trees (fine big  
trees) in places.

Beyond Bonair (some  
distance) ridge again  
appears. Low, rounded  
knobs, timbered.

Soon comes close.

Reached Forest City about on time  
(8<sup>30</sup> am.) & I put up the  
Marion Hotel at Depot (CR & P.)

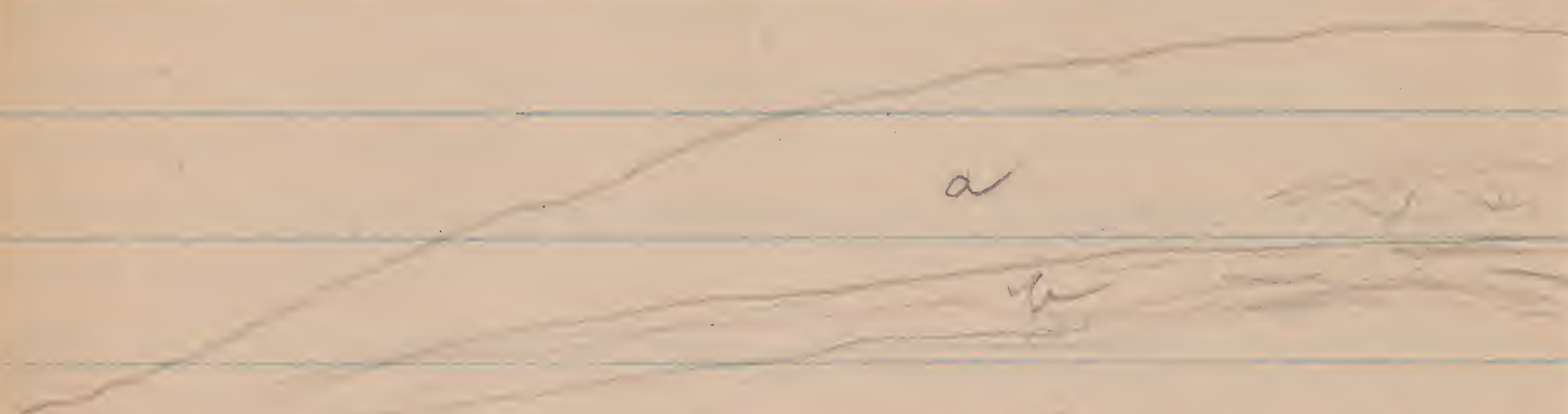
Went out E. along CR top  
and examined cut & picked up  
living shells. Then took team  
& driver, and drove to Crow  
cr. near Madison. Rode also

and 1. along CR & P. E. of  
Forest City - at least  $\frac{1}{3}$  mi long  
In deepest place about  
55 ft deep.

The upper, layer, is yellowish  
B-8 ft deep. Shells  
vertically, & in one place  
in lower part, where white  
it has a good many shells.  
Just below is the chocolate  
layer 2-4 ft & below that  
reddish & whitish much  
clay more or less shown  
by latens.

on roads Northward, & saw  
almost everywhere red  
top dressing. Crowley's Shipy  
is here a series of rounded knobs  
& ridges, & was heavily timbered. Some red.





c Reddish & yellow  
muck

Salps.

a = yellowish brown

b = chocolate layer

c = muck

<sup>c</sup>  
Highest part



horsts



Photos Found by Jan. 2-'07

✓ 17- Cut 1 *Sp. fossiliferous sand*

✓ 18- " 1- looking E on RR.

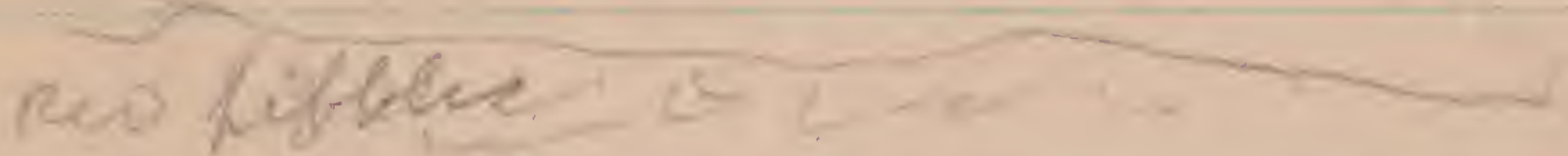
✓ ✓ 19-20- Cut 2



Red loam



White loam



Red pebbles

Galus.

✓ 31- Cut 2- m. or more at extreme left.

✓ 32- E. end of highest part of cut 2

✓ 29- waiting for crowd to fall.

✓ 30- Similar

✓ 31- Crowded knobs

✓ 32- " "

✓ 33- " "

✓ 34- " "

✓ 27- Roots of beach

Cut 2 is old gravel pit (RR)

It is at least 200 yds long.

Low at W. end & higher at E end.

For  $\frac{2}{3}$  of way from W. end, I could follow distinct red

(upper) & white, lower loam.

The line between them is for

the most part sharp from

ground the upper loam being

lighter yellow & thicker

no fossils.

The lower loam is compact

& with iron lines or streaks.

It contains fragments of

shells only, & on several

pebbles. Evidently this

was all washed down from

more higher points. It



shows so only at W. part,  
where bank is lower.

In part photographed

Red loam - 4-5 ft

Wh. loam - 2-3 ft.

Below there is a gravelly  
(water-lain) layer, very  
red, & with sharp iron  
bands between it & wh.  
loam.

Below loam

The gravel here stands about  
7 ft. above base of cut.

Iron nodules are found

showing in both wh. &  
yellow loam.

The highest part of cut 2

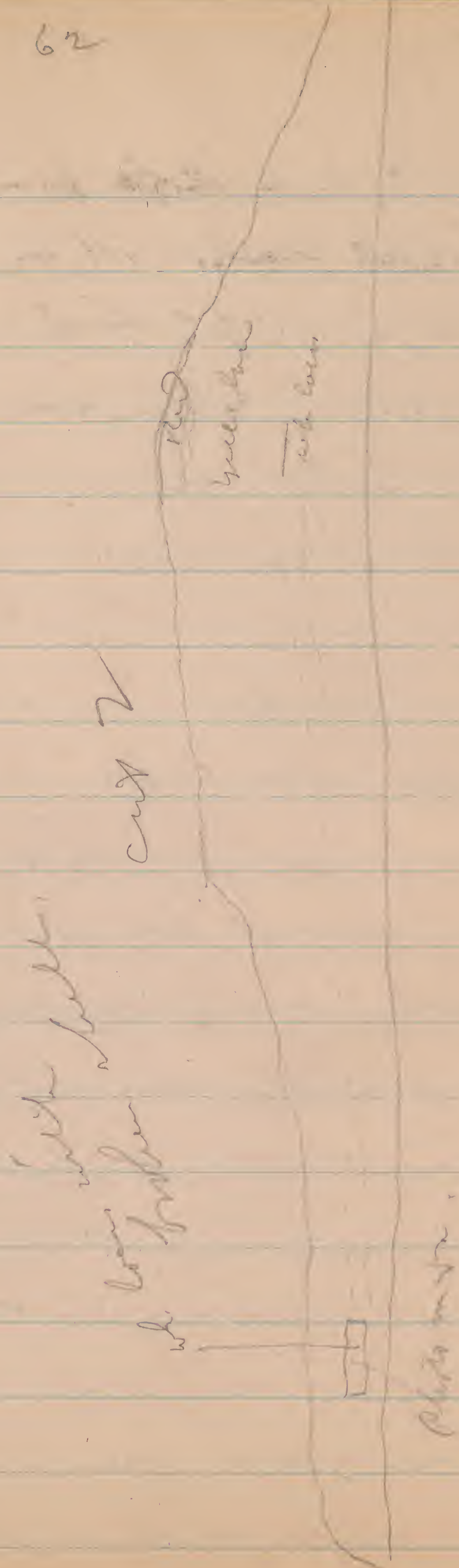
is probably 40 ft high.

White loam shows here &

very highest point) <sup>a little</sup> less than  
1/2 way up & at base is loam  
by talus, but evidently is  
not thick as gravel is  
washed out a little below it.  
The line between yellow &  
white loam is here very  
sharp. (no sample of wh. loam)

The yellow loam (see notes)  
is fully 20 ft. thick,  
with few nodules, no shells,  
& is capped by 2-5 ft  
of reddish top dressing.





Cut 3 is a slope leading down to  
small creek. It is a narrow  
cut - 15 ft. deep or more.  
It shows white loess below, most of  
it with very many vertical iron  
tubes (root tubes) about 4  
or 5 ft. or exposed. Also  
nodules.

The yellow loess, brown rather  
abrupt, is above, & probably  
10 or 12 ft deep.

Saw only fragments of shells  
(very few) - evidently from  
white loess.

In one place between the  
two a <sup>small</sup> deep red loess, with  
blue iron tubes. (See sample)

The yellow appears only  
on lower slope. (Wagon)



the red layer with the later  
runs up into a uniform  
deep red upper part -  
6 or 8 ft. thick.

On top of ridge generally  
the top red dressing  
appears.

Packed two baskets of  
exp. plates &c. + shipped  
by Express.

Jan. 3- 1907 Thurs.  
Rained all morning, +  
train was delayed until  
9<sup>30</sup> AM. - 3 hrs. later.

Madison is on E. side of ridge  
& from that on low  
lands with much timber.  
Standing water everywhere.

Evidence of logging all along.  
Runs so to river.

In places can be seen +  
much evidence of logging.

In logging villages the  
combos are on low piles.

Reached Memphis at noon, went  
over to Poplar str. Station of  
Ill. Cent., got lunch & took  
car for Raleigh Springs, 12 miles  
away (8 "by pike"). Rained all the  
time.



8 mi N. of Nashville

Raleigh Cross

125

Grand (red-light)  
road  
deep gutter all along

Shoreline Canyon 45 ft.

Shore (see sample)

6 ft

This deposits, as shown in a number of cuts, but best in the one leading up hill to the right, are very much like most of those at Forest City.

The upper part (loam) is red, sometimes light, rather fine, & I saw no fossils.

This changes quite abruptly (as much as at Forest City) into a chocolate-red layer, here more prominent.

Below this shades into the gravel by the transition being light red.

The gravel is water-lain, just like in cut 2, Forest City. Took sample of loam.



There are many cuts & washouts on slope to right of road, but all bring out same character. On way along car line I could see red top dressing everywhere.

Left Memphis at 5 PM & reached Dyersburg at 8 PM.

Put up at the Stevens Hotel. In evening wrote notes, etc., & made inquiries about clay exposures.

Jan. 4- Friday

Went out S. on Zoulsches & Dyersburg road, 2 mi. to Capt Henry hill.

<sup>cut</sup> Length - to top of hill 170 paces  
Height - 45 ft + (to top of cut)

On top of ridge the cut is about 6 ft. deep

For about 200 yds. farther S.E., there are low cuts 3-6 ft. with red loam, same as upper part of cut 1, & no fossils.

It is about 10 ft. higher & highest part of ridge back. Fossils become less abundant.

Took clay sample from top of cut dug an another from fossiliferous part about 1/2 way up.



In deepest place, on E. side the cut is about 20 ft. deep.

✓ fossils are scattered though it at least  $\frac{2}{3}$  of the way up. In the lower part there are irregular lime concretions, quite abundant in places.

There are small concretions all through it in this part.

✓ Up toward top there are ~~some concretions, & blue~~ ~~not tubes and fragments~~

✓ Photo 28 - shows cut 1, looking up hill.

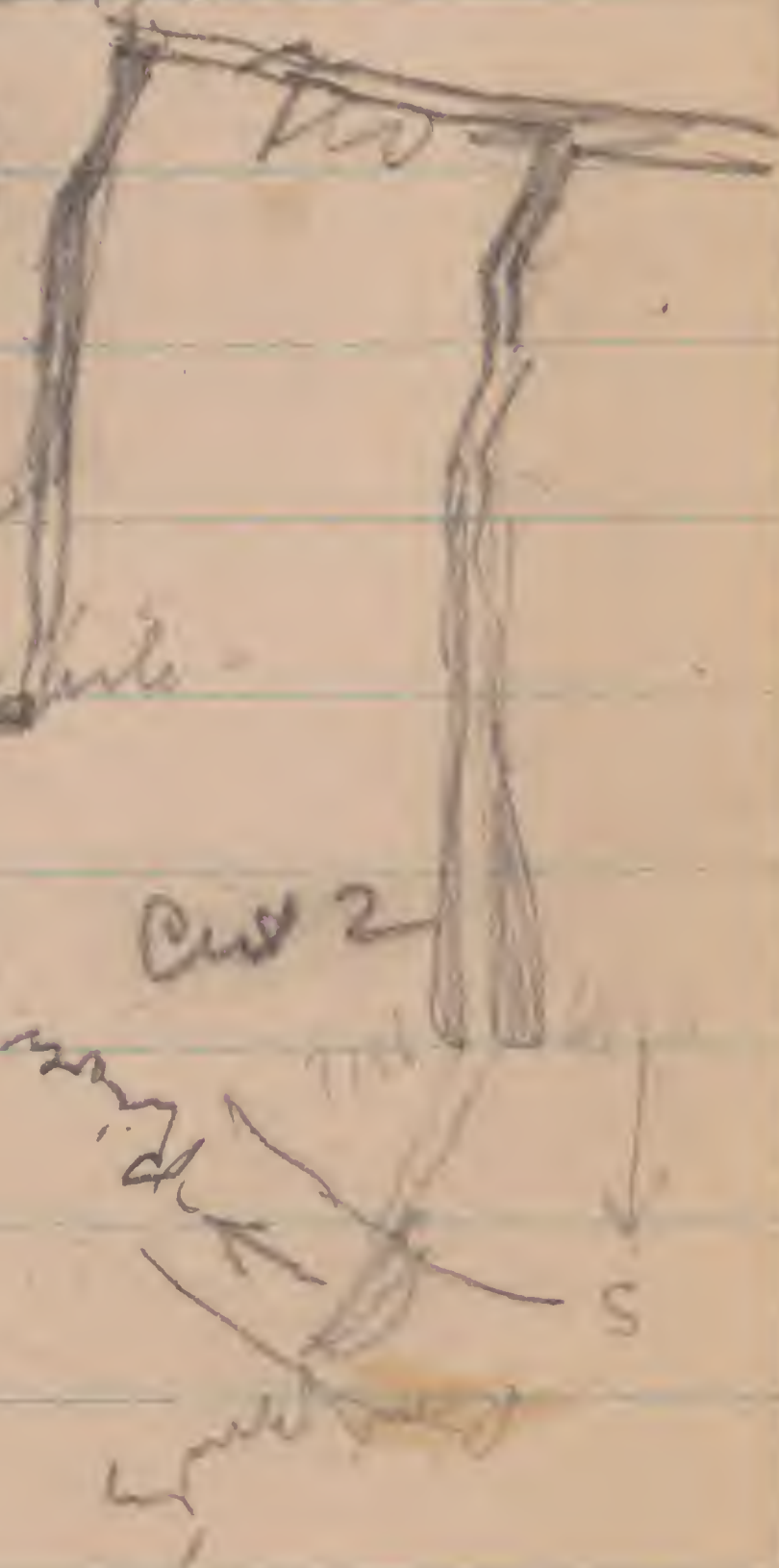
cut 2 is on <sup>same</sup> road S. & E., just before crossing river.

4 mi. from Dyerburg. It is fully 25 ft. deep in deepest place & shows a little cone sand at base near S. end, low down. Part of it is red loam, with blue tubes occasionally nodules or shells.

Photo R. shows cut & timber. Bottom layer, also lumber pile.

In places in lower part of cut the loam is lighter, - a yellow. Generally it is quite reddish.

In middle & upper portion of lamination parallel to surface shown.





cut 2

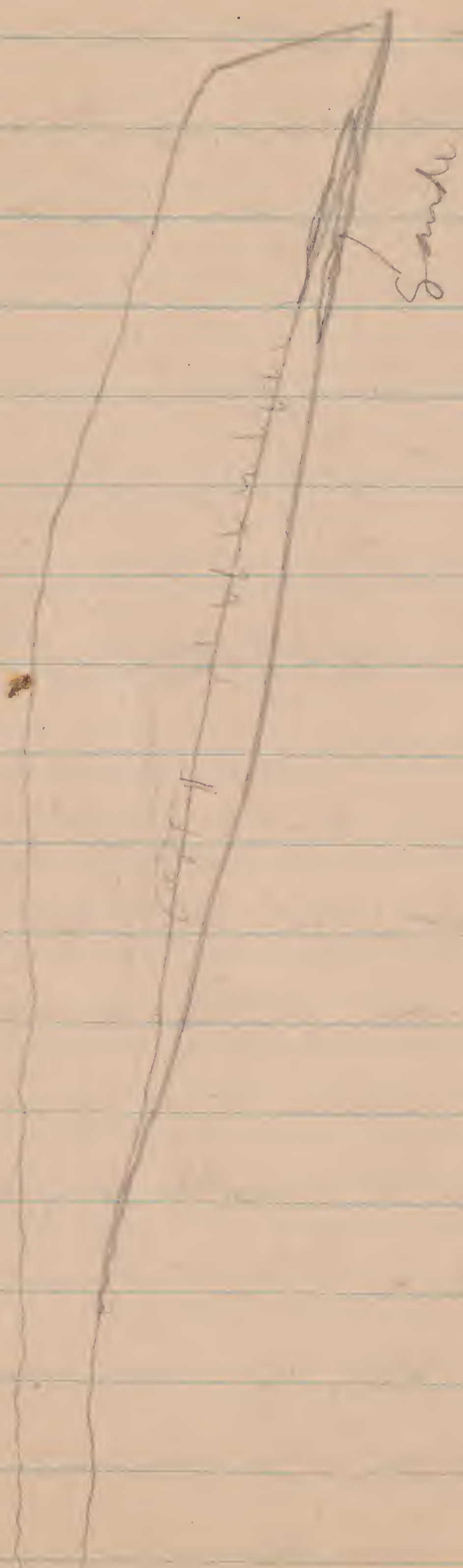
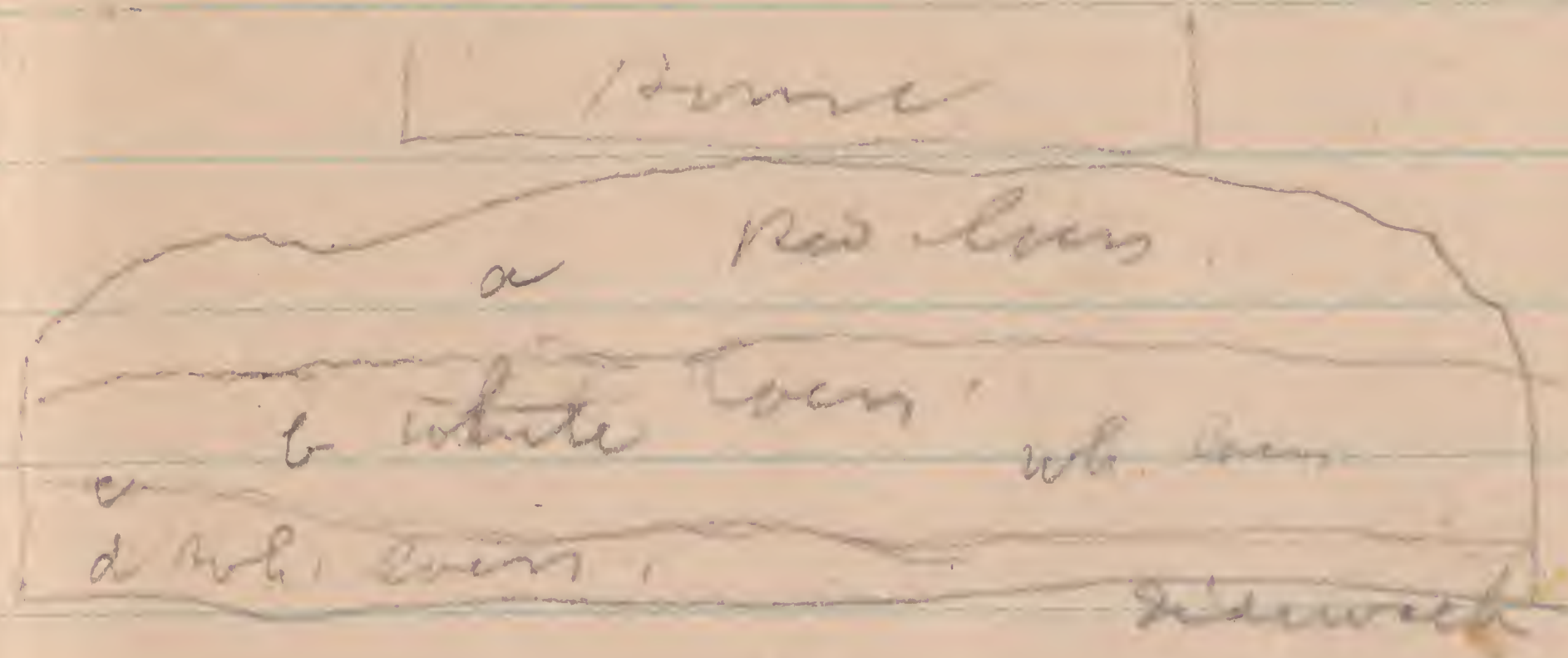


photo 8 - Cut 1 - later

photo x - Looking up: across bridge  
 " " - Bluffs like that in which cut occurs.  
 " " - same as above. 1/10 - same as above.

Cut 3 is opposite cotton mill on street leading up town from depot. It is on N. side

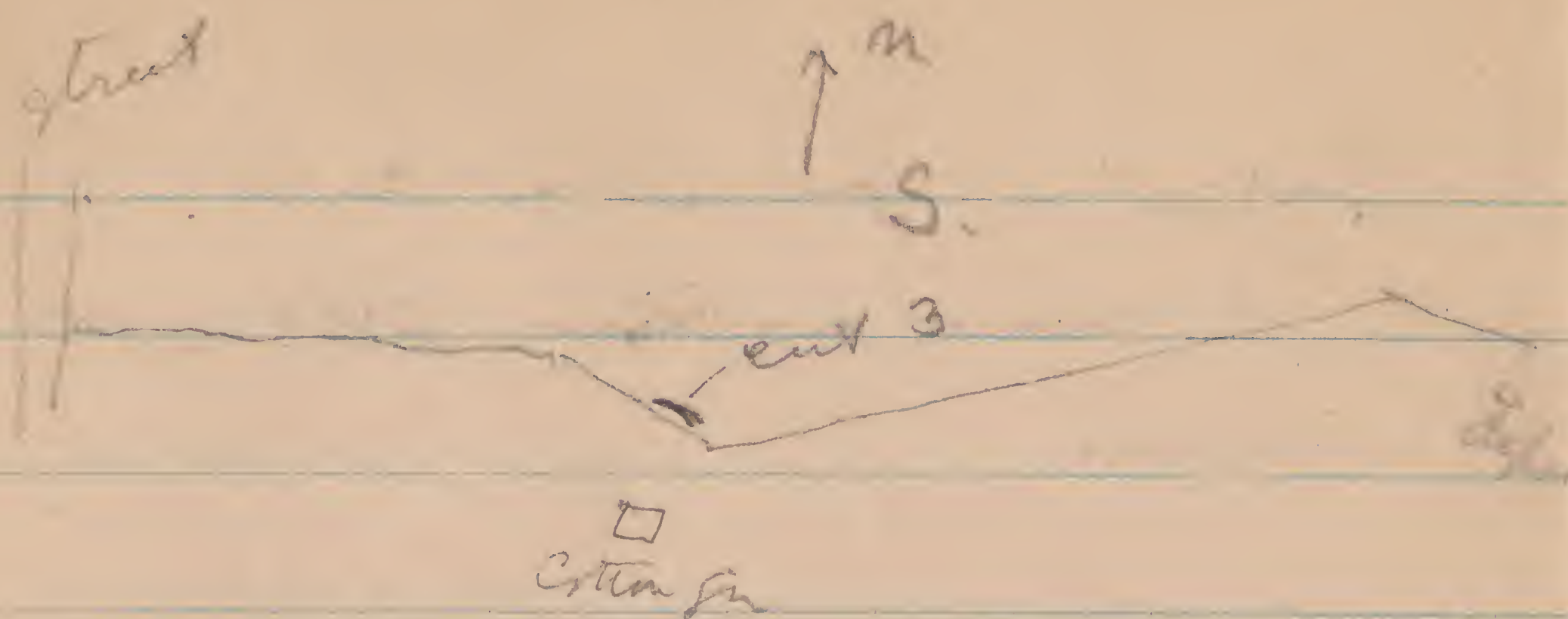


a = Red loam - like cut 1 - 2-4 ft.  
 b = White loam - nodules & streaks with iron & black spots  
 c = Iron loam - 2-3 in. strong  
 d = white loam with vertical root tubes - iron.

Took sample of b.

No fossils or nodules. This cut is rather low - not much above railroad bottom - upper terrace





✓ 27a + 27b - Two views of log loading with derrick on car.

✓ A small engine in the cab.

✓ 5 - Log loader - same view

✓ 6 - " - logs -

✓ A. Brickyard E. of Dyersburg. Tenn.

They use red clay from top of exposed surface to left.

✓ B. Liquidambar - large tree 8 ft. high. Small tree (look like it) with mistletoe

✓ C - Same tree with mistletoe

Trigon call it a black gum. This is the same as the white oak side tree in sight of Dyersburg. at Fulton, Ark.

West end of cut 4 is about 600 ft. from depot. Cut 4 is just E. of depot.

It shows nothing but red loess. Begin 900 ft. W.

of cut 5 (N. side). at 450 ft. W. of end is overhanging bridge & was about 15 ft deep & 900 ft long. Cut 5 - is same as 4

This is about 700 ft. W. of cut 6. 600 ft. W. of cut 6 is a wagon road crossing.

It is 800 ft. long & 8 ft. deep. (a) a short open cut W. of this (just W. of S. side RR.) Cut 6 - same as 4 & 5

This is about 1350 ft. W. of cut 7.

It is about 600 ft. long & about

10 ft. deep. all red loess.

At W. end S. side. This runs farther to brickyard. Took sample of it here. Cut 7 is a long cut &

the deepest. It is over 1500 ft. long & about 30 ft. deep.

It shows red loess (a) above showing into a stream (b)



This layer is about 15 ft thick.

In one place a white layer (c) shows below this & seems to be only 2 or 3 ft thick.

Then comes a deeper red <sup>(d)</sup> much (in most places the yellowish brown layer shades directly into it), & this in turn shades into a white hard pan (e).

This is just like order fourth south.

(d) runs about 3-5 ft & about 1-5 ft. of (e) is exposed.

In places below (d) (red layer) there is a very rusty

layer full of iron concretions (c) is a narrow band, 1 or 2 ft wide, visible only a short distance. Photo D - east? looking E.

The young driver who was out with me in the morning drove out to his father's farm <sup>west?</sup> north, & he says that 3 miles up, where there is a big hill, he saw a bank with shells in it, "just like the bank on Henry Hill."

Left Dyersville at 8 o'clock, and reached Gibbs (= Paducah <sup>once</sup> Ia.) at 9:30 PM. Went to bed at the one hotel.



Jan. 5 Saturday

Was arrived in time for the  
6:34 Am. train on the Chattanooga,  
Nashville & St. L. Reached

Hickman at 8 am

Hickman is located partly on  
slope & partly on high bluffs.  
Most of the business part of town  
is low down on the slope, the  
R.R. running in on low ground  
at foot of bluffs.

Hotel closed & put up at a  
boarding house, the Price Home.

Went E. along R.R.  $\frac{1}{4}$  mi  
from depot began bluffs  
in which I examined Fossils  
& got large numbers of  
fossils.

Set barometer on level of track at depot  
at 100 ft. River at high  
water is about 9 ft. lower.

Cut 1 is an irregular exposure  
about 80 ft above R.R.  
at base of bluffs. It is yellow loess, covering  
whiter below.  
& is capped above with a  
thin red layer, - 1-3 ft.

The yellow loess is sparingly  
fossiliferous (this applies to W. end  
only). The above applies to a little within  
at W. end. The main cut shows  
a loess of light yellow, tending  
to white, with red top dressing,  
& very fossiliferous.  
This is soft & shreds easily.  
Few fine tubules - small.



cuts <sup>1, 2, 3, 4, 5, 6, 7, 8.</sup>  
 cuts 2 & 3 + 4 are  
 really a series across  
 same ridge.

cut 2 is approximately on same  
 level (base) as base of cut 1.  
 at base it shows 2-3 ft. of  
 reddish gravel.

Then a red mud 3-4 ft.  
 (not very distinct) ~~then~~  
 then a yellowish fossiliferous  
 loess - probably 25 ft.  
 deep, with shells scattered  
 all through it.

Lower down the loess, shells

fossiliferous, is redder, & runs  
 into heavy red loess.  
 "Photo 29 shows cut 2 - looking E.  
 " " 30 - " " - Blacktown Post.

From base of exposure 1 to top of  
 hill, which is about as high  
 as any pt. in Hickman, the  
 height is 65 ft. This is  
 on a level with base of cut 1.  
 The shelf, or narrow terrace  
 above which cut 1 rises is  
 70 ft. below top of ridge &  
 this is about base of cut 2.  
 Cut 2 faces west. Cut 1, N.



Cut 3 is similar to cut 1, but shows less dumping. The loess below becomes almost white (see sample) & grows redder upward.

Valley shows base, nothing but loess visible on shelf.

Cut 4 is like 3. It has just as many Pupae etc as 1 + 3, but I picked up fewer.

Cut 5 is a similar but smaller cut. Same Has fewer small shells. & more Pat. - tubularis.

Cut 6 - similar  
~~There are other small~~

cuts in this crescent.

Photo H. - Looking E. from E. end of cut 4

Photo I Looking west (S of E) at cut 4.

Cut 7 - similar to 5

" 8 - " " 5, 6, 7.

Look only larger shells from cut 5, 6, 7, + 8. ~~Photo~~  
~~go to 8, but can't see~~  
~~shells.~~

All the cuts from the E. end of no. 4 on show at base, in washouts.



a red mud below loess,  
 then a few feet of  
 gravel, & then the  
 bulk of bluff made  
 up of white mud,  
 in places as hard  
 & rock, & same as  
 at Ft. Adams,

The hill rises at least  
 150 ft. above RR, which  
 is 8-10 ft. above high water.  
 There is a shelf or terrace  
 below the loess, - just  
 about gravel layer,  
 which extends from cut 2  
 to cut 4. It is about  
 65 to 75 ft above RR.  
 and 25-30 ft of loess is

exposed in cuts, but hill  
 rises still more.



Jan. 6 Sun.

Outskirted somewhere about  
Pineville, Del.

The loess between this  
and Hickman looks  
red, or reddish, just  
like at Hickman &  
at one point I could  
see the heavy red much  
below. This was some  
distance below Belleville, I  
between Belleville & East  
St. Louis a yellow loess  
(but still with red suffusing)  
appears in several cuts.  
Bluffs facing on the  
broad valley are low &  
rounded, but show Coes.

Reached St. Louis at about  
8<sup>30</sup> AM, on how late  
(7<sup>20</sup>)  
Lectured in evening.

Jan. 7 Mon.

Left St. Louis Monday, Jan. 7  
at 2<sup>55</sup> PM.

N. from St. Louis

Just before Larimore - 2 or 3 cuts - <sup>no fossils?</sup>  
some of the lower yellow - redder above.  
Beyond Larimore several cuts of redder loess.

At St. Belleville, just before  
river, I could see a distinct red  
layer, then reddish loess &  
finely yellow loess. In another  
cut a distinct gray loess  
appears just above red layer.  
The best yellow continues here.  
Where bluffs again come close to RR, just  
before reaching Folsom, red layer shows  
above the rock. Beyond Folsom  
rock bluffs high. (See p. 93)



## Box 9

29, 30 - Watchtower - Brook 1 - p. 67

x, xx " p. 67

27, 28 - same thicket " p. 73

~~11 - " p. 73~~

A, B. " p. 71

~~12 - " p. 74~~

add.

13 - Hotel - Ft. Adams - p. 81-I

14 - Blackhouse hill from lower plateau p. 81-I

15 - Bluff - Ft. Adams - p. 85-I

16 - " (family) at landing - Ft. Adams - p. 87-I

17 - Liquidambar - beach - Ft. Adams - p. 84-I

18 - " 1st big cut - Ft. Adams - p. 84-I

19 - Big magnolia - Ft. Adams - p. 83-I

20 - Liquidambar &amp; Honey Locust " p. 83-I

21 - Bark betw. 60-95 ft. below Blackhouse hill p. 81-I

22 - Across Miss. Lagoon - Ft. Adams - p. 82-I

## Box 10 all Eastern

23 - Palmetum - Ft. Adams - p. 81-I

24 - Looking up bluff from Blackhouse hill p. 81-I

25 - Looking inward from Blackhouse hill p. 81-I

26 - " N. over Ft. Adams - p. 81-I

27 - w = 12 box 9.

28 - 2 - Bluff above landing Ft. Adams p. 91-I

29 - Slope of Blackhouse hill - Adams - p. 83-I

30 - Back of big magnolia - Ft. Adams - p. 83-I

31 - Residence - too many magnolias - Vickery p. 13-II

32 - Broken hauling cotton - Ft. Adams " p. 13-II

33 - Cotton bales at landing - Ft. Adams

34 - Waiting for the boat - Ft. Adams

35 - Gull with Guts - landing Ft. Adams - p. 92-I

36 - Spoils " " " " " "







## Box 13

- C - Black gum with ~~smaller~~ Dyerling p. 74  
 9<sup>v</sup> - cut 7 looking E. Dyerling p. 77  
 11 - Black gum E. of Dyerling p. 74  
 13 - Liquidambar Black gum <sup>will</sup> p. 74  
 33<sup>v</sup> <sup>Crowley's Riv. St.</sup> Cut 6 looking N. - Hatching - p. 74 - I  
 34<sup>v</sup> <sup>Crowley's Riv. St.</sup> Across a gash from just beyond N. cut 6 - p. 74 - I  
 1<sup>v</sup> - Bottomland timber - Dyerling - p. 72 - II  
 2<sup>v</sup> - Bluff like cut 1 " p. 72 - II  
 R - Cut 2 - Dyerling - p. 71 - II  
 5<sup>v</sup> - " 1 - " p. 72 - II  
 17<sup>v</sup> Rocks of bank. Ironed Cy. p. 58 - II  
 28<sup>v</sup> Henry's hill Dyerling <sup>cut 1</sup> - p. 70 - II  
 11<sup>v</sup> } Flooded woods - Dyerling p. 72 - II  
 12<sup>v</sup> }  
 I - Head of gr. gulch - Hatching - p. 73 - I  
 II - Head of gr. gulch - Hatching - p. 73 - I

(See p. 87.)

At crossing N. of Dyerling (some miles) a  
 little yellow loam & apparently sandy  
 slow slope rocks. Near Elsbury.  
 Some exposures show back of (w)  
 Clarksville.

As we approach J. Madison  
 a heavy rain with lightning, etc.  
 (See p. 76)

## Box 14

- 29<sup>v</sup> - cut 2 - Hickory looking E. - p. 81 - II  
 30<sup>v</sup> - " " Black gum & roots p. 81 - II  
 21<sup>v</sup> } Two views of log loading derricks  
 27<sup>v</sup> } Dyerling, Tenn. p. 74 - II  
 14<sup>v</sup> - Cut 4 - looking E. - p. 83 - II - Hickory  
 15<sup>v</sup> - " 4 - " W. - p. 83 - II - "  
 13<sup>v</sup> }  
 14<sup>v</sup> } Min. McCumby - Dyerling p. 95  
 5<sup>v</sup> } are these Crowley Riv.?  
 6<sup>v</sup> } Log. loading see p. 58 - II.  
 Dyerling, Tenn.



Expense account

Dec. 29-1906	Lunch, Hatchery, RR. to Vicksburg	2.30	2.40
	RR. Harrison to Cannonburg	.40	.40
	Lunch, Return to Harrison	.60	.60
	Vicksburg; cards, lunch, dray	1.00	1.00
Dec. 30	Hotel Piazza Dray, Porter	2.90	2.90
	Storage Baggage, RR. tickets to Haden	5.25	5.25
Dec. 31	Two lunches, Haden, Dray	.85	.85
	Boxes, cards, stamps	.85	.85
	Lunch	.25	.25
Jan. 1-1907	Lunch Express basket	1.60	1.60
Jan. 2	Hotel (New Pacific)	3.25	3.25
	Cal Porter	.35	.35
	RR. fare to Fort City	1.28	1.28
Fort City	Dray, Livery, lunch	2.55	2.55
	Sox, tie, collar, basket	.80	.80
Jan. 3	Hotel (Marion)	1.50	1.50
	RR. fare to Memphis	1.50	1.50
		27.28	27.28

	Lunch	.30	.30
	Car fare	.30	.30
	Lunch	.25	.25
	Cards	.50	.50
	RR. fare to Dyersburg	2.25	2.75
	Storage at Memphis	.40	.40
Jan. 4	Dyersburg, Tenn. Livery	2.00	2.00
	Hotel dray	2.25	2.25
	Cards - stamps	.35	.35
	RR. fare to Gibbs	1.05	1.05
Jan 5	Hotel at Gibbs	.50	.50
	RR. fare to Hickman	.45	.45
	Hickman; Porter Hotel	1.15	1.15
	Clothes pressed, cards, lunch	1.30	1.30
	Basket, Haircut & bath	.70	.70
	RR. fare to St. Louis	6.85	6.85
Jan. 6	Cards - Otto	.60	.60
Jan. 7	RR. fare to W. Lib. paper	8.20	8.20
	Lunch Quincy - RR. fare from city	.55	.55
	Dray	.50	.50
	Miss Myrtle Mc Curry, Dyersburg, Tenn.	30.45	30.45
		13.14	13.14
		26.29	26.29
		1.15	1.15



(See p. 89.)

(It was dark before we reached Quincy, & hence no observations. Below

Hannibal nearly the same track in evidence.

Attoletta not a promising field for loess below

Hannibal until Ft. Bellefontaine is reached.

Rain let up.

Rev. Isaac Vanhook

834 N. Washington St.

St. Louis

Mo.

From S. B. Z. way.

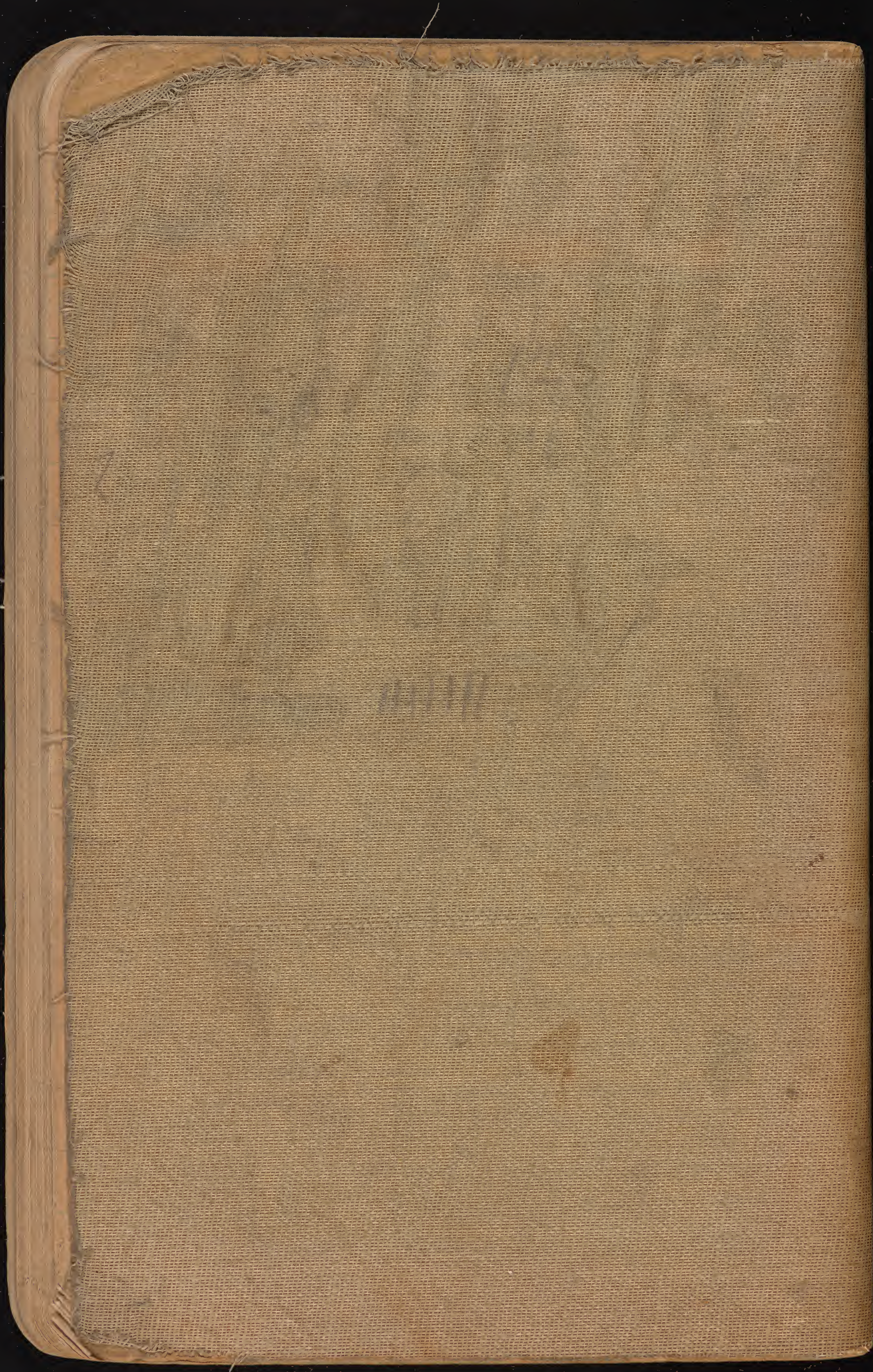
## Hot. home

Avoid draft. Arrange pipes so that every run of pipes can be separately cut off.

Combine pipes from general plant, and small plants.

Arrange benches so that it is easy to cut off parts. Avoid the numerous funny turn of cement —







- H. Mesodon profunda  
 H. " exolata  
 H. " elevata  
 H. Helicodiscus lineatus  
 H. Patula alternata  
 H. Triodopsis palliata  
 H. Stenotrema monodon  
 H. " hirsutum  
 H. Punctum minutissimum  
 H. Zonites arboreus  
 H. " minusculus (?)  
 H. Vertigo gouldi  
 Strobila labyrinthica  
 H. ? Puppa contracta  
 H. Succinea obliqua  
 H. Selenites concava  
 Gyranthus parvus

Lee co - add.

- H. Mesodon albolabris  
 H. " multilineata  
 Triodopsis inflecta

Madison add.

Mesodon Thyroideus

- H. Pomatiopsis labidaria  
 H. Cornutus fulvus  
 H. Patula perspectiva

D. of Forest City

- H. Puppa pentodon  
 F.C. Ciomella subcylindrica

### My additions.

- H. Zonites viridulus  
 H. " multidentata  
 H. Patula striatella  
 H. Succinea avara  
 H. Zonites lasmodon (?)  
 H. Carychium  
 H. Zonites capnodes  
 H. " indentata  
 H. " ligens  
 H. Mesodon clausa (?)  
 H. Helicina orbiculata  
 H. Zephyradium edentulum  
 H. Puppa corticaria  
 Patula solitaria  
 H. Large egg  
 H. Small egg



# PLAT

### SHOWING LOCATION OF PROPERTY IN QUESTION.

Helena, Ark

Sol. Francis Prop.

6 5 4 3 2 1

Back —  
~~Back~~  
College  
Poplar  
Peach  
Columbia  
Franklin  
Pecan  
Walnut  
Cherry  
Ohio,  
Water

1/2 liter  
out

## SECTION.

TOWNSHIP

2.5-

RANGE 5-E 5<sup>th</sup>

